CONTEMPLATIVE PRACTICES: A NEUROPHYSIOLOGICAL APPROACH TO MEDIATING COMPASSION FATIGUE AMONG ANIMAL WELFARE WORKERS

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by

Heather McDermott-Perez

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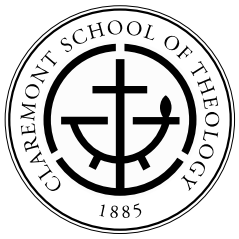

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ABSTRACT

CONTEMPLATIVE PRACTICES: A NEUROPHYSIOLOGICAL APPROACH TO MEDIATING COMPASSION FATIGUE AMONG ANIMAL WELFARE WORKERS

by

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Compassion fatigue is a condition that affects those involved in veterinary medicine, animal rescue and those working in animal shelters alike, the consequences of which can lead to burn out, depression, and even suicide. While contemplative practices are often mentioned as part of a cure for compassion fatigue, no studies have been conducted to measure their efficacy. This dissertation investigates the use of contemplative practices as treatment for compassion fatigue among animal welfare workers by using biofeedback machines that measure the body's physiological responses to animal related stressors. A pilot study was conducted in which a small group of animal rescuers, shelter volunteers and a veterinary technician at an animal oncology center were recruited to participate in an eight-week experiment. At the initial meeting, the participants filled out a questionnaire used to determine levels of compassion fatigue and burn out. Participants then watched a two minute video depicting animals in various states of stress while participants were hooked to biofeedback machines measuring the their respiratory sinus arrhythmia (RSA), electrodermal activity (EDA), 3 lead electroencephalogram (EEG), salivary cortisol, and facial electromyogram (EMG). Participants then attended a six-week course where they were taught several

contemplative practices aimed at reducing stress. The study concluded with the participants returning to retake the questionnaire, fill out an exit survey and watch the video again while measuring the participants' physiological responses. The results showed that the trend in all measurements, with the exception of the participants' EMG and cortisol results—which were inconclusive, was that the majority of the participants supported our hypothesis that stress responses would decrease after engaging in contemplative practices. The trends from this pilot study suggest that a larger study is merited. Beyond the study, there is reason to believe that animal caretakers could reduce compassion fatigue by regularly engaging in contemplative practices. This could reduce turnover amongst animal shelter employees, veterinary staff, and animal rescuers, allowing more animals to get the care they deserve.

To my wife, Candy, whose unwavering love and support got me through this most difficult journey. To our four legged children, Keyser, Candie, Neon, Max, and Mona, who inspire me daily. And to all the innocent shelter animals that I could not save, especially Baylee and Tink—they are the reason I fight when this work gets tough

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CONTENTS

INTRODUCTION

Aside from my aspirations to research and teach contemplative practices at the undergraduate or graduate level, perhaps my greatest passion is animal rescue and advocacy. Outside of the classroom, I dedicate several hours a week volunteering at my local animal shelter, socializing dogs not yet ready for adoption and networking dogs who have ended up on the euthanasia list (otherwise known as death row), and fostering and eventually adopting a pit bull who was rescued from the euthanasia list at the shelter where I volunteer. My involvement in animal rescue has given me first-hand knowledge of the emotional toll this work takes on animal welfare workers—from shelter volunteers to kennel attendants to veterinarians. I have seen friends suffer from burn out and compassion fatigue, which eventually led to the end of their volunteer work at the shelter. These decisions to step away were never made lightly and resulted in feelings of guilt, shame, and disappointment as these decisions impacted not only the people who had to step away but also the animals they care about so much. As a practical theologian, I see this as an opportunity to put my theological training to work in the real world.

In his book titled *A Fundamental Practical Theology*, Don S. Browning expands the notion that practical theology is a reflection of the task of the ordained minister and instead defines it as the "critical reflection on the church's dialogue with Christian sources and other communities of experience and interpretation with the aim of guiding its action toward social and individual transformation."[1] In short, we go through life as usual until a crisis arises. At this point, the practical theologian reflects upon the

[1] Don S. Browning, *A Fundamental Practical Theology: Descriptive and Strategic Proposals* (Minneapolis: Fortress Press, 1991), 36.

tradition's texts and critically applies the texts to the current situation, deciding how to best handle the crisis. After assessing the situation, the practical theologian proceeds using the tradition's rich history, which informs his or her own analysis to return to the situation with a better means to practice his or her tradition in a relevant way. As he puts it, "The view I propose goes from practice to theory and back to practice. Or more accurately, it goes from present theory-laden practice to a retrieval of normative theory laden practice to the creation of more critically held theory-laden practices."[2]

In the present case, my time spent volunteering at my local animal shelter opened my eyes to the crisis that volunteers and staff may face in caring for the animals that they so desperately want to help—feeling that they are not doing enough, that they can not save them all, that they are responsible for the loss of life and all the feelings of guilt and shame that accompany that. As Frank Rogers acknowledges in his book *Compassion in Practice*, self-compassion is often underemphasized and sometimes even subverted.[3] Rogers designed a practice that invites us to turn internally to our "compassionate core," the part of us that was made in the image and likeness of God.[4] Dick Schwartz calls this the "Self" and, through a process called Internal Family Systems Therapy, teaches us how to become "Self-led." Schwartz, Rogers, and the mystics that have preceded us all know that we inherently know how to satisfy our own needs and to behave in a way that is compassionate to ourselves as well as to others, a view that echoes Romans, "Do not be conformed to this world, but be transformed by the renewing of your minds, so that you may discern what is the will of God—what is good and acceptable and perfect"

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[2] Ibid., 7.

[3] Frank Rogers, *The Way of Jesus Compassion in Practice* (Nashville: Upper Room Books, 2016), 17.

[4] Ibid., 67.

(Romans12:2). Therefore, I have developed a six-week class teaching animal welfare workers how to turn internally to listen to the will of their true essence, to revitalize them and to lead them so that they know when they are in need of self-care and so they can listen to the ways they already know how to meet those needs. I have designed a study to test these practices and to find empirical data that supports that these practices can reduce the stress and compassion fatigue that these caretakers are exposed to.

The aim of this dissertation is to begin to lay the groundwork for a larger project where, using the information garnered from this study and perhaps a more in depth study in the future, I design a training or retreat style program using contemplative practices to overcome or manage the effects of compassion fatigue for the animal care community. This is my attempt at creating a more critically held way of caring for those who dedicate their lives to ministering to our animals.

In Chapter One of this dissertation I will review the current literature pertaining to compassion fatigue within this community as well as a sample of the literature available on compassion fatigue among human caretakers for comparison. In Chapter Two I introduce the practices that I chose to use in the study because I believe them to be beneficial for healing and combatting compassion fatigue for caregivers. In Chapter Three I will briefly explain the psychophysiology behind the chosen practices and I will argue why they will be beneficial. In Chapter Four I share the study that I designed and that Dr. Alane Daugherty and I conducted specifically for this dissertation and I will discuss the results and future implications. My intention is to expand this research, turning it into a funded study where I can recruit a more diverse group and larger number of participants. In the long term, I aim to eventually determine which contemplative

practices show the most promise to help those suffering from compassion fatigue so that I can suggest a curriculum using contemplative practices to aid in managing the negative effects of this condition and that will encourage emotional and spiritual rejuvenation for those wishing to continue in this line of work. My intended audience for this dissertation is my committee, with the intention of later expanding it to a larger audience that will hopefully consist of both academic scholars as well as animal welfare workers.

It is important to note the scope and limitations of this dissertation. This body of work is limited to compassion fatigue only among animal caregivers and does not include human caregivers who are also susceptible to the harmful effects. Additionally, it is limited only to the effects of compassion fatigue and does not discuss other health conditions that may arise as a consequence of caring for animals. Finally, only animal welfare workers are discussed. Similar positions, for example people working with cows in dairy farms, are beyond the scope of this project and are not included in this dissertation.

CHAPTER 1

LITERATURE REVIEW

There is no shortage of literature addressing the causes and effects of compassion fatigue for healthcare workers and social workers. However, the abundance of research does not extend to our non-human animal caregivers. While there are a lot of similarities between the two fields, there are also significant differences. Perhaps the most striking difference is that while both human and animal caregivers primarily enter the field because of a desire to help those in need, human caregivers are not put in a position where they have to euthanize those that they have spent time caring for, especially when those they care for are healthy but sadly just unwanted.[5] The purpose of this chapter is to provide a comprehensive review of the existing literature addressing compassion fatigue in the animal welfare community. Therefore, this review is limited solely to the literature pertaining to compassion fatigue, burn out, stress disorders, and other similar conditions as a result of caring specifically for animals. The vast majority of the research has targeted and been conducted on veterinarians but this literature review does also include research on caregivers in the shelter environment as well. Because of the shortage of literature on this topic the sources chosen include research on caregivers for small (dogs and cats) and large (barnyard) animals alike, though the majority of it focuses on those caring for small animals. Three articles dealing with compassion fatigue among human caretakers were also reviewed to show the similarities and differences between human and animal caretakers. In an attempt to come as close as possible to relating to the impact

[5] Richard Bravo, "Role Strain and Emotional Labor: An Ethnographic Study of Animal Shelter Workers" (master's thesis, University of Central Florida, 1999), 2.

of euthanasia on animal caretakers, an article focusing on hospice workers has been included.

This chapter was written using a combination of a chronological and thematic methodology. Because the research on compassion fatigue for those caring for animals is still in the early stages, there are some pieces of literature that make it too difficult to flow seamlessly into a thematic methodology. However, as the field has begun to come together more and more themes have arisen. Therefore, my hope is that this literature review will be best understood by beginning chronologically and then turning into a thematic approach when they sources become similar enough.

DEFINITION OF TERMS

Several of the authors reviewed below agree that there is a conflation of terms used when talking about compassion fatigue in the animal care community and the terms need to be distinguished to further address the issues properly. I would like to be clear that the discussion that follows relates solely to these terms being used in this specific field. The terms had been used in psychology and social work long before they entered this field. There are far too many terms for me to mention and define individually in this section. Still, I do think it is necessary to define a few key terms before delving into the analysis portion of the literature review so as to not confuse the issue further.

For the purposes of this dissertation I will adopt Kathleen Ayl's definitions of stress, burn out, compassion fatigue and posttraumatic stress disorder (PTSD) as I find her to make the clearest distinctions. The early research in this field focused on stress, which can be defined as "the emotional, mental, and/or physical strain that results from

too many pressures and demands in one's life, typically from external sources. Stress can contribute to burn out and compassion fatigue."[6] As the research grew, terms became more nuanced and researchers began talking about burn out, which is "a condition that occurs when, in responding to excessive stresses and demands, an individual demands too much of him—or herself, eventually becoming overwhelmed, exhausted, apathetic, and negative."[7] To further clarify, stress can be thought of as too much (time, hours worked, energy, etc.), whereas burn out is not enough (emptiness, apathy, depletion, etc).[8] Compassion fatigue was first used in discussions about nurses who were suffering from burn out due to trauma that they experienced in their line of work and first used in this field by Charles Figley and Robert Roop in their book *Compassion Fatigue in the Animal-Care Community*.[9] Compassion fatigue is the "physical and spiritual exhaustion, accompanied by acute emotional pain, that stems from a caregiving position."[10] While taking care of others who are suffering, at some point, the caregiver places the needs of others above his or herself and may even stop taking care of his or her own needs. Compassion fatigue is the combination of burn out and secondary traumatic stress, which is work related, secondary exposure to extremely stressful events."[11] One last term I would like to define is posttraumatic stress disorder because it is closely related to compassion fatigue and even shares several of the symptoms, which will be covered later

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[6] Kathleen Ayl, *When Helping Hurts: Compassion Fatigue in the Veterinary Profession* (Lakewood: American Animal Hospital Association Press, 2013), chap. 1, Kindle.

[7] Ibid.

[8] Ibid.

[9] Charles R. Figley, and Robert G. Roop, *Compassion Fatigue in the Animal-Care Community* (Washington, D.C.: Humane Society Press, 2006), 22.

[10] Ayl, *When Helping Hurts*, chap. 1.

[11] Ibid.

in the chapter. Posttraumatic stress disorder is "an anxiety disorder that occurs after one experiences or observes a traumatic event involving significant injury, death, or the threat thereof."[12]

ANIMAL CARETAKER LITERATURE REVIEWED

A.D Elkins and Sandra Brackenridge co-authored a handbook to help those working as part of a veterinary practice team to cope with and manage the work-related stress that they experience. At the time of publication Dr. Elkins was the owner of Surgery Referral Practice and Referral Center and had previously been an associate professor and a practicing veterinarian and surgeon. Sandra Brackenridge, MSW, BCD; LCSW, was an assistant professor in the Sociology/Social Work Department at Idaho State University teaching grief and bereavement, and the operator of a part-time private practice, amongst several other accolades, including developing a program at Louisiana State University that included stress management training for students, veterinary workers, and animal control workers.[13] The handbook addresses the entire team, from the front desk through the veterinarians.

The handbook is extremely helpful in raising awareness about the causes and symptoms of stress and in providing the owner or operator of a veterinary hospital with tools to manage team members who are experiencing stress or burn out. The authors recognize that there is good stress as well as bad stress. They are trying to eliminate the harmful effects of stressors that become excessive in quantity or intensity and are

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[12] Ibid.

[13] A.D. Elkins and Sandra Brackenridge, about the authors in *Managing Stress in Veterinary Practice: A Team Approach* (Santa Barbara: Veterinary Practice Publishing Co., 1997).

incurred over a prolonged period of time,[14] as they can have very detrimental effects such as hypertension, heart attacks, depression, anxiety, and upper respiratory illness just to name a few.[15]

There are some factors that cannot be changed, such as personality type. Type A personality types are more prone to stress and stress related illnesses, while type B personalities are more stress-resistant.[16] This just means one should be more aware of the way they handle stress and the amount of stressors they experience, as many veterinary staff members grossly underestimate their stressor load.[17] They must be aware of life event stressors, environmental stressors, personal stressors, client stressors, and career stressors.[18] Some of these stressors may be evident, while others may be so subtle they go unnoticed. For example, life stressors can range from divorce, death, or a foreclosure to something as simple as a change in eating or sleeping habits.[19]

Once an individual is aware of the causes of his or her stress, he or she can implement methods of coping with stress that work best for that individual. Elkins and Brackenridge suggest reducing stressors, building up resistance to stressors, and controlling reactions to stress.[20] Establishing healthy nutrition, sleep, exercise, and relaxation habits can help alleviate stress.[21] During stressful periods, the body's nutritional requirements change. Foods rich in protein, Vitamin C, Vitamin D, calcium, iron and B-complex help protect the body's immune system to fight off the negative

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[14] Ibid., 7.
[15] Ibid., 13.
[16] Ibid., 18, 41
[17] Ibid., 20.
[18] Ibid., 22-33.
[19] Ibid., 23.
[20] Ibid., 40.
[21] Ibid., 43.

consequences of stress.[22] Getting sufficient REM sleep allow the body to be stronger and in better shape to combat stress.[23] Regular exercise releases tension, restores the body, relieves depression, and builds up resistance to the physiological reaction to stress and potential cardiovascular disease.[24] Relaxation, especially mental relaxation, allows one to refocus away from stress-producing thoughts. Additionally, laughing releases endorphins, which can reduce one's chances of developing stress-related illness.[25] Emotional health and wellbeing are essential to combating stress and aside from awareness, having a support system is absolutely vital to emotional wellbeing.[26]

One element of veterinary medicine that affects virtually everyone in the practice is euthanasia. One study estimated that 3% of veterinary contact with clients involves euthanasia or death.[27] Because of the prevalence of euthanasia it is imperative that employers attempt to prevent and manage stress relating to euthanasia. Veterinary staff must confront their anxiety regarding euthanasia and death and client bereavement. Self-examination is important so that staff members can become aware of their own emotions to help determine if they are experiencing empathy for their clients or if they are having an emotional reaction to the death.[28] Further, when there is an empathetic response to a staff member's sadness or preoccupation with death, an examination of personal losses should take place. The staff member will then need to work through his or her own mini-

[22] Ibid., 45-6.
[23] Ibid., 47.
[24] Ibid.
[25] Ibid., 48.
[26] Ibid. 49-50.
[27] Ibid., 77.
[28] Ibid., 80.

grief process in order to alleviate emotions and prevent stress.[29] Support among staff can help prevent judgment and self-blame. Therefore, regular staff meetings where feelings about death and grief can be discussed are strongly encouraged.[30]

If stress is not properly managed, it can lead to burn out. At the time of publication, burn out had only recently appeared in a few articles in veterinary literature.[31] The authors warn readers to be aware of the physical, emotional and behavioral signs and symptoms of burn out so readers can recognize it in themselves and also in their coworkers. The primary physical symptoms include exhaustion, insomnia, gastrointestinal tract problems, head, neck, and back aches, hypertension, and sinus problems/allergies amongst other symptoms. A few examples of emotional symptoms are depression, anxiety, apathy, defensiveness, powerlessness, and hopelessness. Finally, the behavioral symptoms can include abuse of alcohol, drugs, food, and sleep, withdrawal from social contacts, irritability, inability to complete tasks, and loss of enthusiasm and a sense of humor.[32] Please note that these are not exhaustive lists but only some of the warning signs to look for. Prevention is not easy, it must be done on a daily basis and professional counseling is needed for those with severe burn out. Nonetheless, employers can encourage those suffering from burn out to take vacation, spend time with a hobby, exercise, and the employer could even set up structured peer groups to allow for venting and letting everyone know they are not alone in their feelings in order to prevent burn out.[33]

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[29] Ibid., 81.
[30] Ibid., 83.
[31] Ibid. 60-1
[32] ibid., 62.
[33] Ibid., 65, 71.

Managing Stress in Veterinary Practice: A Team Approach is a really great source that laid the foundation for investigating compassion fatigue. Elkins and Brackenridge clearly explain the dangers of ignoring stress in veterinary practice and they give easy and practical suggestions to increase the longevity of the entire team. I appreciate that they take into consideration the entire staff and not just the veterinarians or veterinary technicians because every person is affected in such a high stress environment and I would imagine recognition alone helps staff members feel understood and supported. Their section on burn out was cutting edge at the time but as research advanced it seems their use of the term burn out also includes symptoms and consequences of compassion fatigue but they could not have distinguished the two terms at the time as nobody was studying compassion fatigue in this field.

In 1998, Barbara Brewer Welsch examined the relationship between job stress, job satisfaction, and burn out in veterinarians in private, predominately equine, practice. She also aimed to determine if relationships among these variables were moderated by gender and mediated by coping styles.[34] At the time this study was unique because most of the literature on job satisfaction did not consider job stress.[35] Furthermore, in previous studies done regarding burn out or job stress most of the literature represented only the male perspective, as that was normative. The literature that did include a comparison between genders was inconsistent or conflicting.[36] Yet, gender differences in work values had been consistently reported, with women valuing hours and travel time the

[34] B. B. Welsch, "Gender Differences in Job Stress, Burnout and Job Satisfaction as Mediated by Coping Style of Veterinarians in Private Equine Practice" (PhD diss, University of Florida, 1998), 2-3.

[35] Ibid., 5.

[36] Ibid., 9, 11.

most, while men placed the highest value on leadership, opportunities for advancement, and decision-making ability.[37]

This exploratory study found that job stress was negatively correlated with job satisfaction and positively correlated with burn out. Women reported more stress and burn out than their male counterparts, but also reported significantly higher job satisfaction. Male and female veterinarians agreed on the frequency that they experienced various stressors, yet the women found 45.7% of the stressors significantly more stressful than the men did. Both males and females used various coping techniques but women tended to use emotional coping more frequently than males, while the males used more detached and rational coping than the women.[38] Welsch relies on previous literature by Folkman and Lazarus to categorize coping strategies. She states that emotional coping refers to attempts at repressing (or expressing) the emotions evoked due to the threat; detached coping refers to feeling independent of the event and emotion associated with it; and rational coping refers to task oriented coping methods such as working out a plan for dealing with what has happened.[39] For men only, emotional coping was the only style shown to interact with job stress by increasing the positive association between job stress and burn out.[40]

A similar study was conducted three years later comparing the levels of job satisfaction and job related stress for married male and female veterinarians. Dianne Wimberley, the author, hypothesized that women would be at a greater risk for job stress,

[37] Ibid., 31.
[38] Ibid. 61.
[39] Ibid., 25-6.
[40] Ibid., 61.

marital/family stress, marital dissatisfaction, and divorce.[41] This study found no significant differences between married male and female veterinarians in satisfaction with: global career satisfaction, kind of work, amount of work, coworkers, income, work conditions, and career future. The greatest areas of dissatisfaction for both genders were income and the amount of time required at work. There was no difference in the effect of work-related stress on one's career but women did report greater marital/family stress on their careers with less perceived spousal support than the males reported.[42] Another noted difference was that women experienced more stress when owners did not perform the recommended procedures, when euthanasia was required, and when owners were abusive toward their animals, while men were more stressed about owning and managing their own businesses.[43]

Welsch's study provided insight into the relationship between job stress and job satisfaction and Wimberley provided additional insight in to veterinarians' home and family lives. However, I am not entirely convinced the studies will have significant relevance to my proposed project. First and foremost, Welsch does not specifically investigate the stress caused from having to euthanize patients. She comes close when she inquires about stress caused from caring for terminally ill patients and when she asks about having to make difficult or moral choices but she does not address the responsibility of taking a life and consoling the client afterward.[44] I am unsure what stress factors Wimberley specifically asked about, as her survey was not disclosed.

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[41] Dianne L. Wimberley, "Work Satisfaction, Work-Related Stress, Marital/Family Stress, And Spousal Support Of Married Veterinarians" (PhD diss, Oklahoma State University, 2001), 91.

[42] Ibid., 119.

[43] Ibid., 116.

[44] Welsch, "Gender Differences," 83-4

Euthanasia was mentioned as a stressor in her discussion but I am not sure about the specifics. Considering the frequency that stress resulting from euthanasia is mentioned in the other literature I reviewed, I imagine this will be an integral part of my research, especially when dealing with shelter workers and volunteers. Additionally, I am not sure that any of the findings will have an impact on the creation of a contemplative practices program.

Richard Bravo designed an ethnographic study of animal shelter workers at a shelter in Arkansas. The purpose of his study was to explore the nature of the demands that shelter workers experience from both euthanasia and public interaction related events. More specifically, he questioned if working in the animal shelter created role strain and if there was evidence of dissonance resulting from public interactions.[45] He stated that, "role strain occurs when an individual experiences stress associated with the expectations within their role."[46] To answer these questions, Bravo employed several research methods including extended observations, participant observation, interviews, and supplemental data was collected in the form of documents.[47]

Bravo found that euthanasia-related tasks cause considerable role strain for the employees and may negatively influence their emotional well-being.[48] He conducted several interviews and provided several personal accounts that demonstrate the mental and emotional anguish that the employees go through. All are similar, however, I find "Elizabeth's" provides the best glimpse of the sad reality of shelter workers. She states,

[45] Bravo, "Role Strain," 3.
[46] Ibid., 1.
[47] Ibid., 23.
[48] Ibid., 35.

> I didn't know what I was getting myself into, no… But I had no idea how many animals would come through the door and you know?... When that quarantine room back there is full with like forty [sic] cats and you got 16 cats waiting in holding to go back, it's just like *unbelievable*. I mean you just, a lot of stress with this job. Where am I going to put this animal? And then it's like well, I'm going to have to euthanize 15 so I can make room for these guys and tomorrow they'll [sic] be 15 more coming in so we'll have to euthanize more. I mean it's just, its [sic] just incredible… the week you do it you'll come home at night and cry about it because you'll see that animal, you'll see it slump over, I mean its [sic] just constantly in your head… night times [sic] the worse [sic] because during the day your [sic] pretty good about keeping yourself distracted. Now sometimes there are ones we get really attached to. When an animal goes down some of us choose to hold it just because we want to be there in its last minutes and that is *really*, *really*, [sic] hard…[49]

Her feelings describe the "caring-killing paradox," which can be described as "the conflict that exists between providing care for animals and assisting or performing euthanasia," which is common in the shelter environment.[50]

The shelter employees also experience role strain in regard to public interaction. They generally feel that the public is "uneducated" about responsible companion animal ownership and that uneducated owners are seen as irresponsible owners who do not spay and neuter their pets. They view these owners as adding to the overpopulation problem that then land these animals in the overcrowded shelter for the workers to take care of to the best of their abilities. As a result, the owner surrender interactions are visibly the most difficult and emotionally frustrating tasks for the shelter workers in terms of public interaction. These findings were backed up by previous research.[51] Despite these feelings, the shelter workers must remain understanding, friendly, and helpful to these people so that they do not dump their animals in more irresponsible ways. This takes a

[49] Ibid., 33.
[50] Ibid., 31.
[51] Ibid., 56.

toll on the workers, as they have to deal with the death and the emotional strain, while many of the owners walk away without feeling any conflict.

The strain caused from euthanasia-related tasks and from public interaction causes feelings of alienation and emotional dissonance, which results from of the lack of congruency between what one displays and what one feels.[52] As Bravo explains,

> Experiences and feelings associated with euthanasia-related events embody the emotional experience of death for shelter workers becoming a permanent part of their emotional cognitive schemas (Denzin 1985). Public interactions, especially negative ones associated with surrenders, draw shelter workers into reflection on the embodied experience of death. These interactions appear to draw shelter workers into conflict with the moral self (Denzin 1985).[53]

Feelings of hopelessness develop when shelter workers see the endless amounts of animals come into their shelter, knowing they will have to euthanize them at some point in the near future.[54] Despite this, shelter workers have found some ways to cope with the conflict. They have found that focusing on the positive allows them to manage the negative feelings and continue to do their jobs.[55] They also talk about it with each other because they know that family and friends cannot relate to what they do, but their coworkers understand and share the same emotions and struggles.[56] Lastly, they rationalize what they are doing. The workers do not enjoy euthanizing animals, but they rationalize the situation so that it becomes the most humane option for the animal.[57]

I found this study incredibly valuable for my research objectives. While the author was investigating the project from a sociological standpoint, which is not

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[52] Ibid., 56-7.
[53] Ibid., 58.
[54] Ibid., 59.
[55] Ibid., 41.
[56] Ibid. 42-3.
[57] Ibid., 44-5.

necessarily of interest to me, the information he gathered is invaluable. For starters, from personal experience, his study mirrored what I see in my local shelter weekly. The personal interviews detailing the emotional struggle of these caretakers and the incredible work they do are far more insightful than any compilation of statistical data I have come across. For me, this study turns the findings from all other sources into actual people with actual stories, feelings and emotions. That aspect makes this study one of the most important sources that I found.

Stacy Lynn Davies also studied stress and coping skills in the shelter environment, but focused solely on shelter directors in the state of Illinois. She sought to discover what the specific sources of job stress were for shelter directors, how they coped with these stressors, and what the best method of coping was for the directors.[58] Almost every director (90%) experienced at least one stressor a week.[59] The highest ranking stressors included too much work, dealing with the public, responsibility for life and death decisions, supervision of employees, pressure for high performance, and long hours on the job, while the stressor that occurred most on a weekly basis was animal medical emergencies.[60]

The shelter directors used various methods of coping with stress, but the methods that were tried the most were taking time to be alone, spending time with pets, delegating job responsibility, talking to peers about stress, and throwing themselves into work.[61] Davies wonders if those that used "delegating job responsibility" or "spending more time

[58] Stacey Lynn Davies, "Stress and Stress Management of Animal Shelter Directors in the State of Illinois" (master's thesis, DePaul University, 2000), 4-5.
[59] Ibid., 26.
[60] Ibid.
[61] Ibid., 28.

with pets" may have found the best solutions for working with job stress, as a lower percentage of people that used these methods had muscle tension or physical exhaustion, which were the top responses of physical manifestations of stressors.[62] She also found that job stress was not necessarily tied to job satisfaction, but that there was a significantly positive relationship between job satisfaction and working in a "no-kill" shelter that did not euthanize animals.[63] This study found that the factors that were beneficial to dealing with the job stress that shelter directors experience were having a strong family and peer support system, owning pets, and being a good manager of one's self and business.[64]

This study seems to be in alignment with the other sources found, though it is the only piece of literature focusing on stressors specific to management. On top of the high stress environment at shelters, it is important to note that there are factors completely unrelated to the animals that cause stress and that those stressors need to be taken into consideration as well. This will need to be taken into consideration when choosing appropriate contemplative practices to address stressors.

The book *Compassion Fatigue in the Animal-Care Community* moves beyond stress and burn out and looks at the compassion fatigue, which was generally focused on psychotherapists and their clients, and applies it to those caring for shelter animals.[65] The authors point out the limitations to previous studies, noting a lack of conceptual clarity and methodological limitations.[66] Previous research conflated compassion fatigue

[62] Ibid., 32.
[63] Ibid., 30, 32.
[64] Ibid., 3.
[65] Figley and Roop, *Compassion Fatigue in Animal-Care*, 24.
[66] Ibid., 25.

with other similar terms, such as job burn out, vicarious trauma, and general psychological distress. Howbeit, the authors very explicitly state that in order to have compassion fatigue, there must be a compassionate caretaking relationship.[67] Shelter workers bond with and wish to relieve the pain and suffering of the animals in their care, putting them at risk. Very little previous research addressed how compassion fatigue related to social support, history of trauma, coping strategies and stress in general.[68] Further, previous studies did not include a comparison group that had not been exposed to traumatized clients, so as to control for the therapists own trauma experiences.[69]

Compassion fatigue is rampant in the animal-care community and it very well may be because shelter workers are a by-product of multiple high-risk exposures including the perception that the job is low level, budget cuts, the volume of animals, coworkers, and the physical environment.[70] As a matter of fact, an Executive Director of the Humane Society of Broward County once brought in a hospice and bereavement specialist to work with his staff, the specialist stated that euthanasia workers have difficulty working through the normal grieving process because the animal deaths are so prevalent and never ending.[71] The Executive Director concluded that the inability to handle the trauma led to feelings of isolation and low self-esteem.[72] Perhaps this may explain why studies show that animal control workers are at higher risk of compassion fatigue than other caregivers, as euthanasia is not part of a human caretaker's work.[73]

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[67] Ibid., 37.
[68] Ibid., 25.
[69] Ibid., 26.
[70] Ibid., 46
[71] Ibid., 43.
[72] Ibid.
[73] Ibid., 48.

The prevalence of compassion fatigue can be directly traced to the negative situations and emotions that animal caregivers encounter.[74] Sadly, there is very little support for veterinarians who are suffering. A 2005 survey found that most practices do not proactively prevent euthanasia-related stress. As a matter of fact, only 12% of respondents reported that it was addressed at staff meeting and proactive measures were taken.[75] Twenty-two percent of respondents said staff members talk about it amongst themselves but the practice does not address it and, astonishingly, only half of the respondents said it was even acknowledged amongst their doctors and staff members.[76]

Luckily, there are ways to revitalize oneself to help mitigate the effects of compassion fatigue. Compassion satisfaction must be increased, so that caretakers can remember the good parts of their jobs and remember why they choose to do what they do everyday.[77] The authors recommend managing stress at work and give several suggestions how to do this, such as breathing exercise, meditation, group support, and debriefing.[78] They also recommend managing stress away from work, also giving examples in this arena, including a self-care checklist.[79]

Compassion Fatigue in the Animal-Care Community does a great job explaining compassion fatigue, the history of the problem, similar terms and stress-related problems, and the symptoms and effects of compassion fatigue. Unfortunately, due to the constraints of this review, I could not delve deeper into the more nuanced information provided in this text, particularly the effects and symptoms of compassion fatigue and

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[74] Ibid., 67.
[75] "When Helping Others Hurts You," *Veterinary Economics* 46, no. 8 (2005), 21.
[76] Ibid.
[77] Figley and Roop, *Compassion Fatigue in Animal-Care,* 70-1.
[78] Ibid., 71 -88.
[79] Ibid., 89-92.

their relation to similar disorders. Because it explained in greater detail some of the information already covered in previous research, I chose rather to focus on information that has not yet been covered by previous texts in this review.

One of the problems with compassion fatigue in this particular field is the strong sense of denial amongst veterinarians and other animal caretakers. Veterinarians are especially prone to compassion fatigue because they are generally empathetic by nature, but as Julie Scheidegger brings to light, high achieving people are accustomed to not asking for help so that others do not perceive it as a weakness.[80] Her sentiments are substantiated in an anecdotal article, written by Kristi Reimer, in which she was speaking with a marketing executive who had spent several years in the human health industry before transitioning to animal health. He told her that doctors do not like treating patients with depression because they think, "If I made it through medical school without having a nervous breakdown, they should be able to pull themselves out of whatever funk they're in and get on with it."[81] In a survey conducted by Reimer's employer, a veterinarian echoed the same feelings. When asked for advice dealing with burn out, compassion fatigue, and depression, the vet responded with 'Put your doctor coat on and buck up,' a feeling Reimer could relate to.[82] Scheidegger says that veterinarians in school really need to be taught that it is okay to ask for help because talking about it with others, which is often hard for veterinarians to do since most people do not want to hear about abused, injured, ill, or dying pets, and receiving that support is what helps

[80] Julie Scheidegger, "Veterinarians May Ignore Signs of Compassion Fatigue," *DVM360* 45, no. 5 (2014), 33.

[81] Kristi Reimer, "Depression: Hard to Understand Unless You've Been There," *DVM360* 46, no. 5 (2015), 5.

[82] Ibid.

veterinarians combat compassion fatigue.[83] She also recommends self-care practices like acknowledging the positives in the day, taking time to do an activity that one enjoys, and spending time with one's family. If daily self-care does not work she believes professional help is necessary at that point.[84]

Over the years many people have weighed in on how they feel it is best to treat stress, burn out, depression, and compassion fatigue. I have mentioned several suggestions thus far, most of which are pretty similar and which are repeated throughout the literature. Some authors do offer creative approaches that are not seen in other literature that I would like to mention. Dana Durrance wrote two articles (more like one two-part article spanning two issues in DVM News Magazine) about compassion fatigue, the first of which defines the condition and lists its symptoms and reactions.[85] The second article addresses ways to overcome compassion fatigue. She suggests that we can build resiliency if we simply take lessons from our pets. For example, she says, "Guard the fence. Patrol it often," which translates to establish healthy emotional boundaries with your clients.[86] Another lesson is "Break out the toys and the catnip," to remind veterinarians to keep a good sense of humor while they are at work.[87] She names 11 light-hearted lessons that really do have very practical and beneficial outcomes. Dr. Krista Magnifico advises her readers to trust their guts. She says that she pays attention to her emotions and if something does not feel right, a request to euthanize a healthy

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[83] Scheidegger, "Veterinarians May Ignore," 33.

[84] Ibid.

[85] Dana Durrance, "Recognize Symptoms of Compassion Fatigue: Are You a Wounded Caregiver?," *DVM* 38, no. 1 (2007), 35.

[86] Dana Durrance, "Overcoming Compassion Fatigue," *DVM* 38, no. 2 (2007), 44.

[87] Ibid., 45.

animal for example, she will say no to her clients.[88] She says she grapples with compassion fatigue every day that she is at work, but that she stands by her core values and remains true to herself and if a client doesn't care about their pet, she isn't the right veterinarian for them.[89]

Rather than treating veterinarians after they are already suffering, Michael Rank, Tracy Zaparanick and J. Eric Gentry developed a preventative treatment to help non-human animal care professionals (NACP) cope with job-related compassion fatigue. After the authors pioneered the first ever mixed methods investigation into the prevalence of compassion fatigue in veterinary and shelter medicine, they developed a three-phase "training-as-treatment" protocol: the first phase consisted of a two day accelerated recovery program where the participants learned about compassion fatigue, phase two was an Interactive Resiliency-Education and Planning Web-Based Project follow-up training, and phase three was a one-day peer to peer training where the participants learned skills for intervening with other professionals to help them lessen symptoms and enhance resiliency to compassion fatigue.[90] Stephanie Davis actually briefly wrote about it shortly after the study was conducted but before the authors had tested their treatment plan and published their findings.[91] This article reports their findings and the authors report that the training as treatment showed statistical and clinical significance for

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[88] Krista Magnifico, "Conquering Compassion Fatigue," *Veterinary Economics* 54, no. 12 (2013), 32.

[89] Ibid.

[90] Michael G. Rank, Tracy L. Zaparanick, and J. E. Gentry. "Nonhuman-Animal Care Compassion Fatigue: Training as Treatment." *Best Practices in Mental Health: An International Journal* 5, no. 2 (2009), 42.

[91] Stephanie Davis, "Can Caregivers Care Too Much?," *DVM* 34, no. 8 (2003), 58.

lowering symptoms amongst participants.[92] These positive results were maintained six months after the training when a follow up was done.[93]

The birth of this study actually happened completely by chance when Tracy Zaparanick, then filling the role of human healthcare professional at the Center for the Study of Human Animal Interdependent Relationships at the School of Veterinary Medicine at Tuskegee University, agreed to pick up Kathy Mitchener, a veterinary oncologist, who was flying in to give a presentation for the school.[94] The pair began talking about their experiences working in veterinary offices (Zaparanick had been a veterinary assistant) and began comparing notes on the emotional toll such a job takes on animal caretakers. They realized that compassion fatigue could be overcome with self-care and that self-care actually had to be the number one priority over animal wellbeing because it is necessary for the caretaker to be fully present so that they can best help the animal patient and the human client (the animal's owner).[95] A couple years after this chance meeting, Zaparanick teamed up with Eric Gentry and Michael Rank and one of the most important studies linking compassion fatigue and animal caretakers was born.

Their study was not the only instance in which prevention was used to successfully aid veterinarians to properly manage stress, burn out and compassion fatigue. First, it is important to mention that high stress, burn out and compassion fatigue are not unique to America. A 2011 study showed that veterinarians are overrepresented

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[92] Rank, Zaparanick, and Gentry, "Nonhuman-Animal Care," 42-3

[93] Ibid., 55.

[94] Tracy L. Zaparanick, "Compassion Fatigue: An Agent of Change, and a Changed Agent," *Reflections: Narratives of Professional Helping* 14, no. 4 (October 15, 2008), 77, accessed August 3, 2015, https://web.archive.org/web/20170114212637/http://www.reflectionsnarrativesofprofessionalhelping.org/index.php/Reflections/article/view/961/781.

[95] Ibid., 79.

for psychological distress, more specifically depression and stress states, but not for anxiety. The same study found that the main determinants of depression, stress, and burn out was gender, with females showing greater risk, years after graduation, and being a companion animal, mixed or equine practitioner or an associate in a veterinary practice.[96] Be that as it may, the authors did not take into consideration some of the same factors as the researchers that I have previously reviewed. For example, euthanasia was not a named stressor, yet it repeatedly shows up as a factor that causes a lot of stress. By 2014, the Australian Broadcasting Corporation aired a segment addressing the extremely high rates of suicide amongst veterinarians in Australia, citing one suicide every 12 weeks, and showed how one place was able to avoid any of their veterinarians committing suicide.[97] In 1997, a local branch of the Australian Veterinarian Association set out a graduate support scheme, where an experienced veterinarian is paired up with a veterinary student at Murdock University for support and advice.[98] At the time of airing, not one young veterinarian who had participated in the program had taken his or her life since its inception.[99] The association also began educating veterinarians about depression and suicide amongst within the profession as well as teaching them how to recognize signs of burn out and depression amongst colleagues.[100]

In 2013, Kathleen Ayl begins to clear up the conflated terms in the literature that preceded her. Actually, a short article was written in publication as late as 2015, for the

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[96] P.H. Hatch, et al., "Workplace Stress, Mental Health, and Burnout of Veterinarians in Australia." *Australian Veterinary Journal* 89 (2011), 462-3.

[97] "Sad Vets," Australian Broadcasting Corporation, aired in 2014, DVD (Sydney ABC Commercial, 2014), 00:03.

[98] Ibid., 03:26.

[99] Ibid., 05:00

[100] Ibid., 06:43.

sole purpose of differentiating between burn out, compassion fatigue, and depression,[101] yet, in my opinion, Ayl does a much more thorough job. In her book *When Helping Hurts: Compassion Fatigue in the Veterinary Profession*, Ayl begins by clearly defining all applicable terms (see the Definition of Terms section above for some of the most relevant terms). She then illuminates and nuances some of the terms to clarify the relationship between the terms. For example, she compares compassion fatigue and PTSD, pointing out a difference between the two is that in order to warrant a PTSD diagnosis, one must meet at least two criteria of each of three groups of symptoms, including intrusive recollections, avoidant/numbing symptoms, and hyperarousal.[102] She then proceeds to say that she feels the two are similar in that both PTSD and compassion fatigue involve the restriction of feelings and astutely notes that 'the more we ignore our feelings—by running from them or trying to bury them in an effort not to feel them—the more power we give them."[103] Although the definitions and the relationships between all the similar terms and disorders can be nuanced, Ayl does explicitly state that they are not so clear in real life because it is likely that those suffering are suffering not just from one ailment, but one could easily experience PTSD and compassion fatigue at the same time, and daily stressors are also compounding those feelings and leading to burn out.[104]

While on the topic of PTSD, it is worthy of mention that there is a 2013 case study that shows that a man fit all the diagnostic criteria of PTSD except that the trauma occurred to his dog rather than to another human. To elucidate, a man and his dog were

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[101] "Burnout, Compassion Fatigue, Depression-what's the Difference?," *DVM360* 46, no. 5 (2015), 26-7.

[102] Ayl, *When Helping Hurts*, chap 1.

[103] Ibid.

[104] Ibid.

pedestrian victims of an automobile accident that caused injury both to the man and his dog. The man had no recollection of the impact, and although he felt pain, he was haunted by the memory of his dog crying and being unable to help her.[105] He was later referred for neuropsychological and psychological testing because of the emotional stress regarding the injuries to his dog (who did survive).[106] It was determined that the man fit all of the diagnostic criteria for PTSD, according to the Diagnostic Statistical Manual of Mental Disorders, 4th edition (DSM-IV-TR), except that "criteria A requires the traumatic event to be 'a threatened or actual death or serious injury to the self or others,'" where others refers only to humans.[107]

Ayl expands on the human-animal bond and explains why the loss of an animal can lead to such devastating feelings. She explains that the human-animal bond is "known as *attachment,* which J. Blowlby (1969) defined as the 'lasting psychological connectedness between two living things."[108] While that definition could apply to human relationships as well, she points out that the grief that results from the loss of a pet can often equal or exceed the grief that results from the loss of a human relationship because of the intensity of the loss of a relationship with one's "source of nonjudgmental companionship and unconditional love."[109] Compassion fatigue results when a person is

> devastated by the repeated exposure to the pain and trauma of others, which leave the caregiver feeling overwhelmed, angry, exhausted, and ultimately, unable to care about anything. When left unaddressed, the

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[105] Nadine Watters, Ronald Ruff, and Christina Weyer Jamora, "Can a Posttraumatic Stress Disorder be Caused by a Traumatic Injury to a Companion Pet?" *International Journal of Psychological Studies* 5, no. 3 (2013), 185.

[106] Ibid., 184.

[107] Ibid., 183.

[108] Ayl, *When Helping Hurts*, chap. 3.

[109] Ibid.

> condition can lead to career dissatisfaction, high turnover rates, and even substance abuse or suicide.

Given that explanation, it is easy to see why veterinarians are so susceptible to compassion fatigue.

After a very in-depth chapter discussing euthanasia, she becomes the first author in my review to ponder the abnormally high rates of veterinarian suicide. She wonders if the prevalence of death and euthanasia coupled with the veterinarians need to explain, justify, and encourage euthanasia changes their attitudes about death—making it a more viable option when they themselves are feeling intense suffering. Additionally, veterinarians not only have access to drugs that can be used to end a life, but they also have the knowledge to ensure the end result is death and not a failed attempt at suicide.[110] In fact, intentional overdoses accounted for 82% of all veterinary suicides in the United Kingdom, while it only accounted for 33% of the suicides in the general population.[111]

Ayl closes her book by giving the reader suggested exercises and strategies to help cope with compassion fatigue, many of which have been mentioned previously in this review so I will not expand on this much further. However, Ayl brings a very important issue to light, explaining that there is something called "caregiver guilt" and that one must give themself permission to take care of one's own needs.[112] She recognizes that people are allowed to feel an array of emotion, such as anger, guilt, sadness, disappointment, etc., and that the key is not to ignore the pain but to "recognize it, refrain from judging it, and thereby allow it to move through you."[113]

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[110] Ibid., chap. 4.
[111] Ibid.
[112] Ibid., chap. 8.
[113] Ibid.

Kathleen Ayl's book is one of the most important pieces of literature that I reviewed. In my opinion she addresses and rectifies (as much as one person can) a lot of the weaknesses in the field. She recognizes the limitations in the field due to the ambiguity of terms and begins her book by distinguishing those terms. She also goes into great detail explaining the factors that contribute to compassion fatigue, the symptoms, and then consequences of not addressing the disorder. While the whole book is full of great information, perhaps I am most impressed with her emphasis on the dangers of ignoring feelings and elucidating the fact that it is healthy to feel these emotions and that we are not to judge them, but simply recognize them. That is a level of insight that I have not found in any of the other sources—at least not to this extent. I find that with this, she has bridged the gap between this field and spiritual formation, leaving the much needed-space for compassion practices to aid in healing.

HUMAN CARETAKER LITERATURE REVIEWED

Recognizing the prevalence of compassion fatigue among social workers, in their article titled "The Social Psychology of Compassion," Melissa Radey and Charles R. Figley argue for a paradigm shift among social workers, calling for avoidance of negative consequences and focusing instead on what leads those in the field to flourish. They believe that compassion stress, if handled properly, can lead to a sense of flourishing rather than compassion fatigue. [114] Their proposed model, which builds on Barbara Frederickson's work on compassion satisfaction and adds their social work perspective,

[114] Melissa Radey and Charles R. Figley, "The Social Psychology of Compassion," *Clinical Social Work Journal* 35 (June 2007), 208, accessed February 13, 2017, http://dx.doi.org/10.1007/s10615-007-0087-3.

suggests a reciprocal relationship between affect, resources and self-care and together they contribute to clinicians' positivity-negativity ratio and result in the presence or absence of compassion satisfaction or compassion fatigue.[115] The positivity-negativity ratio is defined as, "the ratio of pleasant feelings and sentiments (or positive affect) to unpleasant ones (or negative affect) over a given period of time," and studies have shown that the ratio should be at least a 3 to 1 ratio theory of flourishing.[116] This is important because negativity narrows people's behaviors to actions that help us to survive, like fight, flight, reject, or isolate. Whereas, positivity expands the array of thoughts and actions to include play, explore, cooperate, interact, and greet for example, and it generates a greater flexibility and innovation.[117]

Their model begins with the social worker's ability to appropriately discern and judge the amount of altruistic behavior in professional, social, or intimate/family situations. If the individual cannot do that it may cause him or her to over- or under-respond, which can disrupt the mechanism that either reinforces compassion, produces apathy or burn out, or leads to compassion fatigue.[118] For example, distress can be useful because it can allow the social worker to empathize and connect with the client who is suffering, but if not modulated correctly, the distress can be consuming. Given that empathetic practitioners will inevitably face negativity, it is imperative that social workers can rely on a constant source of inspiration to increase their positivity.[119] Radey and Figley suggest three ways of doing that: (1) increasing positive affect or keeping a

[115] Ibid.
[116] Ibid., 210.
[117] Ibid., 209.
[118] Ibid., 210.
[119] Ibid., 211-2.

positive attitude toward clients, (2) increasing resources to manage stress, and (3) increasing self-care.[120]

To increase positive affect, the authors suggest focusing on the successful moments throughout their sessions rather than dwelling on the negative. Additionally, the importance of collegial support should be emphasized so that clinicians recognize their clients' strengths and triumphs.[121] From an organizational standpoint, increasing a social worker's caseload variety will allow the practitioners to more easily see the success in their work.[122] Providing a warm and welcoming environment is also important.[123] The authors argue that resource building "revolves around one's 'compassionate core' grounded in altruism. The core consists of the individual's inner resources and capacities… and accumulated wisdom derived from life experiences."[124] Self–care is a potential means to increase clinician's physical, intellectual and social resources.[125] Self-care techniques focusing on increasing physical resources may include activities such as exercising, healthy eating, taking time off, self-reflection, spending time with friends and family, and therapy. Intellectual resources may include continuing education or even reminding practitioners that revisiting their course-work can help them in their clinical positions. Reaching out to friends, colleagues, and supervisors can increase social resources.[126]

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[120] Ibid.
[121] Ibid., 211.
[122] Ibid. 212.
[123] Ibid., 210.
[124] Ibid., 209.
[125] Ibid., 210
[126] Ibid., 212.

While many of the suggestions given to prevent compassion fatigue echo those given in the literature regarding animal welfare workers, the presentation of the authors' model to increase the positivity-negativity ratio is unique. Their recognition that work stress is unavoidable but can be channeled in such a way that it can actually increase compassion satisfaction somehow destigmatizes compassion fatigue and produces an aura of hope. When clinicians are faced with negativity, the simplification of a 3 to 1 positivity ratio makes change by increasing affect, resources, and self-care seem that much more attainable. This model could be easily applied to animal caretakers and would have a lot of value in that field.

The article above provides innovative ways to increase compassion satisfaction, but the reality is that little is known about the factors that predict resilience and health among helping professionals. Additionally, various strategies for coping with compassion fatigue have been recommended by theorists, researchers and trainers but few studies have actually been conducted evaluating the effectiveness of the various approaches.[127] In 2008, Kyle D. Killian sought to change this when he published a mixed methods study that explored the relationship between clinicians treating trauma survivors and compassion fatigue, burn out and compassion satisfaction. The qualitative portion of the study examined the emergent themes, including stress symptoms and coping strategies. The quantitative study sought to determine the individual and contextual factors that lead to burn out, compassion fatigue, and compassion satisfaction for

[127] Kyle D. Killian, "Helping Till It Hurts? A Multimethod Study of Compassion Fatigue, Burnout, and Self-Care in Clinicians Working With Trauma Survivors," *Traumatology* 14, no. 2 (June 2008), 33, accessed February 12, 2017, http://dx.doi.org/10.1177/1534765608319083.

therapists who work with trauma survivors.[128] It is important to note that the author considers compassion fatigue and vicarious or secondary trauma to be synonymous, which differs from some of the literature that has previously been reviewed in the animal caretaker literature.[129]

Killian garnered an in-depth understanding of participants by actively participating in the their lives. Interviews were open ended and aimed to understand how the clinicians recognized stress, how job stress impacted their personal and professional lives, and what coping skills they used to relieve the stress.[130] The participants included 20 clinicians ranging from 28-57 years of age, 16 of which were female and four of which were male. They have worked with victims of childhood sexual abuse from two to 16 years, with a mean of eight years.[131] Killian found that all of the therapists identified their stress via bodily symptoms such as muscle tension, headaches, and a lack of energy. All therapists also identified several risk factors that lead to work stress and compassion fatigue. In order of frequency, they named high caseload demands. workaholism, personal history of trauma, regular access to supervision, lack of a supportive work environment, lack of a supportive social network, social isolation, worldview (overabundance of optimism, or cynicism, etc.), and self-awareness, or the ability to recognize and meet one's own needs.[132] The self-care strategies mentioned included process time and supervision, quality time with friends and family, exercise, and spiritualty. Of particular importance, all 20 therapists stated that spirituality played a

[128] Ibid., 34.
[129] Ibid., 33.
[130] Ibid., 34.
[131] Ibid.
[132] Ibid., 35-6.

major role in self-care.[133] They defined spirituality as "a worldview that positions them outside the 'individual.' It is a relationship with a larger force that guides them in their overall life and more specifically, their practices."[134]

This study produced valuable data that can assist therapists and their employers in preventing and alleviating work stress that leads to compassion fatigue. First, therapists are familiar with the use of somatic techniques, such as bodily awareness and dual awareness when treating patients. This study shows that perhaps they would benefit from employing these techniques to themselves.[135] Second, the same percentage of males and females reported that case material sometimes negatively impacts their sexual relationships, while a higher percentage of women expressed concern that case material might negatively affect their personal relationships with their partners and children.[136] Perhaps a more nuanced study of gender differences is needed. This qualitative study brings to light the importance of maintaining peer support, participating in continuing education, and assessing new information techniques. Finally, Killian acknowledges that debriefing with supervisors, consultants, and colleagues were reported as crucial and basic strategies that may help alleviate the effects of compassion fatigue but he calls for more research using advances statistical techniques to explore these relationships.[137]

For the quantitative portion of the study Killian administered a questionnaire that was designed to measure social support, personal trauma history, affective coping style, self-care strategies, burn out, emotional self-awareness, work environment stressors and

[133] Ibid., 36.
[134] Ibid., 36-7
[135] Ibid., 37.
[136] Ibid.
[137] Ibid.

resources, and work drain.[138] Work drain was defined as "a condition where job related stress spills over and affects one's ability to enjoy off work hours at home."[139] The participants included 104 therapists, 21 males and 83 females between the ages of 25 and 64 years old. Forty-eight percent of participants were white, 21% African American, 21% Latina, and 10% were Asian. Thirty-six were licensed professional counselors, 25 were licensed professional counselors as well as marriage and family therapists, 17 were marriage and family therapists only, 14 were licensed social workers, and 12 were counseling psychologists. All specialized in the treatment of trauma survivors, primarily children referred by Child Protective Services for their experiences of child sexual abuse from three agencies in a large metropolitan area in the Southern United States. The average time in the profession was 9.02 years and the average caseload ranged from five to 40 cases.[140]

Killian had three hypotheses:

> (1) Social support and locus of control at work will have a positive relationship with compassion satisfaction and clinical contact hours will have a negative relationship with burnout; (2) Work drain, lack of morale at work, and neuroticism will have a positive relationship with burnout; and (3) Work drain and history of traumas will have a positive relationship with compassion fatigue and emotional self-awareness will have a negative relationship with compassion fatigue.[141]

The results showed that three variables accounted for 41% of the variance in the dependent variable of compassion satisfaction. Those variables in order, starting with the greatest, are: social support, weekly hours of clinical contact, and the therapists' locus of control at work. Another multiple regression analysis showed that three variables

[138] Ibid., 38.
[139] Ibid.
[140] Ibid., 37-8.
[141] Ibid., 38.

accounted for 74.1% of the dependent variable burn out. Those are: symptoms of work drain, lack of work morale, and neuroticism. A third multiple regression procedure showed that four variables accounted for 54% of the variance in the dependent variable of compassion fatigue. Those are: work drain, therapists' sense of powerlessness regarding other social welfare or judicial systems that are failing their clients, emotional self awareness, and therapists' history of traumas.[142] Affective coping style and specific self-care strategies proved not to be significant factors among any of the three dependent variables, but affective coping style did play a role in overall work stress among the therapists. As Radey and Figley suggested in the article above, the use of proactive and emotionally positive self-care strategies like receiving supervision, reducing workload, and socializing colleagues proved to be associated with lower work stress in this study.[143] Thus, all three hypotheses were supported by the data.

This study has practical implications for employers and education systems. Killian notes that most of the therapists stated that they had not received any formal training in terms of professional self-care and suggest that this could be implemented when therapists are being trained or employers could implement a self-care program. Further, since low emotional self-awareness and a history of trauma programs would benefit from facilitating therapist self-awareness and/or the self of the therapist as part of their curricula.[144] In the end, Killian suggests that trainers, educators, and supervisors may need to shift paradigms and focus on education and training and a more systematic

[142] Ibid., 39.
[143] Ibid., 40.
[144] Ibid., 41.

approach of advocacy for healthier working conditions rather than focusing on individualistic efforts.[145]

Killian's study is important not only because it tests several of the current theories regarding the factors contributing to compassion satisfaction, burn out, and compassion fatigue, but it also tests the relationship between coping styles and strategies to reduce job related stress. His study supports the current research in trauma within the helper professions. The practical implications of this study would likely be beneficial to the animal welfare community as well, particularly in terms of creating a warm and friendly working environment and stressing the importance of social support.

The final article reviewed focuses specifically on people who work with hospice patients. Hospice care professionals (HCPs) are particularly prone to stress because of the frequency with which they experience death and dying, grieving families, personal grief, traumatic stories, observing extreme physical pain in patients, and emotional and physical exhaustion.[146] The authors of this article make sure to distinguish between burn out and compassion fatigue because there is some overlap between the constructs. According to B. H. Stamm, burn out has a slow onset and is the result of long-term work related issues, whereas compassion fatigue may have a rapid onset and may be related to one particular event or long-term exposure to several to many traumatic stories.[147] It is also worth noting that the authors use B. H. Stamm's definition of compassion fatigue,

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[145] Ibid., 43.

[146] Karen Alkema, Jeremy M. Linton and Randall Davies, "A Study of the Relationship Between Self-Care, Compassion Satisfaction, Compassion Fatigue, and Burnout Among Hospice Professionals," *Journal of Social Work in End-of-Life & Palliatiaitve Care* 4, no. 2 (May 2008), 102, accessed February 27, 2017, http://dx.doi.org/10.1080/15524250802353934.

[147] Ibid., 104.

which is the "result of specific secondary exposure to traumatic events (also known as vicarious trauma)."[148] This is consistent with the definition that Killian used in the article above.

The literature that the authors reviewed for this article stated that the factors that lead to burn out are: low salaries, demanding schedules, varying work shifts, low social recognition, lack of financial resources, role ambiguity, and difficult client behaviors.[149] Compassion fatigue, on the other hand, is the result of "long exposure to the suffering of others, listening to descriptions of traumatic events experienced by others, little to no emotional support in the work place, and poor self-care."[150] Finally, the factors that enhance compassion satisfaction are: positive affect, optimism, having and utilizing several social resources, maintaining good health, and leading a balanced life. However, there is very little empirical research to prove the effectiveness of specific self-care strategies.[151]

In 2008, Karen Alkema, Jeremy M. Linton and Randall Davies conducted a study exploring the relationship between self-care, compassion satisfaction, compassion fatigue, and burn out among HCPs.[152] Three data collection instruments were used to collect data from the participants. The authors designed a basic demographic information sheet, the Professional Quality of Life Assessment was used to determine the participants'' quality of life using the three subscales: burn out, compassion fatigue, and compassion satisfaction. Lastly, the Self-Care Assessment Worksheet, which measures

[148] Ibid.
[149] Ibid., 103.
[150] Ibid., 103.
[151] Ibid., 104-5.
[152] Ibid., 105.

the degree to which individuals engage in a variety of self-care activities within the following six areas: physical, psychological, emotional, spiritual, professional workplace, and balance.[153] The authors hypothesized that the HCPs who engaged in several self-care activities would show higher levels of compassion satisfaction and lower levels of compassion fatigue and burn out.[154]

Thirty-seven home care HCPs from two hospice agencies in the Midwest participated in this study. Thirty-five of the participants were women and only two were men. There were 28 Caucasians, two African-Americans, one Asian-American, one Middle Eastern, one "multiple, and two declined to answer. The age of the participants ranged from 29 to 64 years old and the average age was 46.35 years old. The average length of employment in the participants' job was 53 months and the average time in hospice care was 72.91 months. Education ranged form a high school diploma to a doctoral degree.[155]

The results showed a strong negative correlation between compassion satisfaction and compassion fatigue as well as a negative correlation between compassion satisfaction and burn out. Along the same lines, there was a strong positive correlation between burn out and compassion fatigue. Other than compassion fatigue and self-care, compassion fatigue and burn out were negatively correlated to all aspects of self-care, while compassion satisfaction was significantly correlated to emotional care, spiritual care, and having a balanced work and personal life.[156] Age was significantly positively correlated with burn out but not with compassion fatigue or compassion satisfaction and total

[153] Ibid., 106-8.
[154] Ibid., 105.
[155] Ibid., 109-10.
[156] Ibid., 113.

months in the profession was correlated with all aspects of self-care. No significant correlations were proven between burn out, compassion fatigue, and compassion satisfaction and self-care strategies, however, significant positive correlations were observed between all self-care variables.[157]

Some of the findings lead to interesting implications. While compassion satisfaction has negative correlations to both burn out and compassion fatigue, the strength of the relationships differed, suggesting to the authors that compassion fatigue and burn out are indeed different constructs though related. However, the results are correlational in nature and thus cannot predict causality between self-care and compassion fatigue and burn out.[158] The fact that, aside from physical self-care, compassion fatigue was significantly related to all aspects of self-care may suggest that taking part in only one type of self-care strategy may not be enough to overcome compassion fatigue but partaking in several self-care strategies can assist. Along those same lines, a variety of self-care strategies may help alleviate compassion fatigue and burn out but compassion satisfaction was only positively correlated with the emotional, spiritual, and personal-professional balance, which may suggest that those subset may be the only self-care strategies that increase compassion satisfaction. The fact that all self-care strategies are correlated leads the researchers to believe that HCPs who take care of themselves in one area are more likely to also engage in all areas of self-care. It was also interesting that HCPs with more months of service in the profession seemed to engage in a variety of self-care strategies more so than those with less experience. Also, it opens the possibility that those who engage in a variety of self-care strategies are able to remain

[157] Ibid.
[158] Ibid., 113-4.

in the profession longer than those who do not because of burn out or compassion fatigue.[159] In the end, the authors suggest that HCPs and their employers match the types of self-care strategies that they engage in with their desired outcome to either increase compassion satisfaction *or* to reduce compassion fatigue and burn out.

This study was insightful because although it did not correlate specific self-care strategies to burn out, compassion fatigue, and compassion satisfaction, it was able to correlate those variables with the six subsets of self-care—physical, psychological, emotional, spiritual, professional workplace, and balance. I am most interested in the researchers suggestion that the HCPs that engage in a variety of self-care strategies may have lasted in the profession longer than those who did not. I would love to see further research done in that area in the future, perhaps interviewing participants who have left the profession because of the stress it caused. Again, this study seems to support the findings of the other studies reviewed and also seems like the results might have crossover with animal care welfare workers as well.

CONCLUSION

Several themes emerged from the literature reviewed. In the literature pertaining to animal welfare workers, the same causes of work stress were mentioned repeatedly. Those causes were: euthanasia (and often the prevalence of it), abuse, neglect, no outlet, lack of awareness, client interactions, lack of prevention, and denial of a problem. This lead to feelings of isolation, low self-esteem, and depression, among other things. This was also similar to the literature on professionals helping human trauma survivors.

[159] Ibid., 115.

Similarly, many of the same coping strategies were either employed or recommended to alleviate those stressors. Those coping strategies include: increasing positive affect, debriefing, exercise, group or outside support, doing fun activities with family and friends, setting boundaries, increase awareness of compassion fatigue so that caretakers will start to recognized when they are stressed, and meditation/spirituality. Many of the coping strategies were similar to those employed by professionals employed in human caretaking roles.

While there were similarities between those caring for human trauma survivors and those caring for animals, there were also significant differences. One of the most obvious to me, and possibly the most important, was the lack of awareness—of signs and symptoms of stress as well as the prevalence of burnout and compassion fatigue among animal welfare workers. The professionals working with human trauma survivors have a background in psychology and are very well aware of the causes and symptoms of stress based on the profession that they have entered and that they have been trained to recognize it in their clients. This also implies that coworkers and employers are aware and are probably taking some steps to prevent burn out and compassion fatigue, such as providing a warm and friendly working environment and acknowledging the importance of debriefing with colleagues or supervisors. This is a luxury not afforded to those helping animals. Lastly, the biggest difference is the issue of euthanasia and the lack of a comparable situation with human care professionals.

After reviewing all of the literature, I am absolutely convinced that there is a need to introduce contemplative practices to the animal welfare community. Specific practices can be chosen to meet self-care strategies that have been either suggested or proven to

help either alleviate compassion fatigue and burn out or to increase compassion satisfaction. For example, positive affect can be increased by engaging in practices like Affecting Breathing and Remembering Sacred Moments, which can be used to focus on positive feelings, emotions, or situations. Most contemplative practices involve relaxing but some are specifically used, across several religious traditions, to calm the mind and body, such as the Breath Practice. Remembering Sacred Moments, the Breath Practice, and the Compassion Practice can all be used to connect practitioners with their chosen deities, or for those that are not religious, with whatever they deem to hold sacred value in their lives, thus fulfilling the spirituality self-care strategies. However, most importantly to me, all contemplative practices increase awareness of mind and body. This can help animal caretakers, and human helping professionals alike, recognize when they are experiencing symptoms of stress and how those stressors are affecting them mentally and physically.

It is encouraging that many of the sources listed meditation as one of the ways to cope with or overcome compassion fatigue; some even offered some simple breathing or muscle relaxation techniques but it seemed that all authors were not well versed in anything beyond that. This gives shows promise that there is not only a need for these practices but also an awareness that they are missing. Hopefully this will translate to veterinarians and other animal caretakers being very receptive to education and introducing more techniques. I plan to use neurophysiology to investigate a variety of practices that will aim to produce very specific biological reactions. My hope is that grounding these practices in science will legitimize their necessity amongst veterinarians and animal welfare workers.

CHAPTER 2

CONTEMPLATIVE PRACTICES

Although compassion fatigue among animal caretakers has been studied and meditation is part of the suggested protocol to combat compassion fatigue, there is very little research into deciphering which practices are effective. For the purposes of this dissertation, the term contemplative practices will be used in lieu of meditation. Contemplative practices will be defined as a transformative connection with the calm, non-judgmental, curious, and compassionate core at the center of our inner self, deepening our relationship with the Sacred. They are exercises designed to help us find the leadership of what Frank Rogers calls our "compassionate core" and what Richard Schwartz calls our "Self," our true essence and the ground of our being.[160] One of the goals of the pilot study is to determine which practices the animal caregivers find to be the most helpful in relieving stress.

Contemplative practices can be seen as fitting into seven main categories: stillness, generative, creative, activist, relational, movement, and ritual/cyclical. The following examples are not exhaustive but are meant to illustrate the similarities and differences between the categories. Stillness practices consist of quieting the mind, centering oneself, silence, and meditation. Generative practices include activities such as Lectio Divina, visualization, beholding, and loving-kindness meditation. Creative practices are different from the previous two and consist journaling, music and singing, improvisation, and contemplative arts. Activist practices can include pilgrimage to areas

[160] Rogers, *Practicing Compassion*, 60-1.

where social justice issues are highlighted, work and volunteering, vigils and marches, and bearing witness. Storytelling, deep listening, dialog, and council circle are all examples of relational practices. There are also movement practices, which include walking meditation, labyrinth walking, yoga, dance, Aikido, Tai chi ch'uan, and Qigong. Finally, ritual/cyclical practices may be more familiar to some and can include retreats, ceremonies and rituals based in spiritual or cultural traditions, and even establishing a sacred/personal space.[161] The practices chosen for the study were a mixture of stillness practices and generative practices. The reason for this is two-fold. First, as I mentioned previously, the literature reviewed highlights the fact that animal welfare workers seem to lack awareness—particularly bodily awareness of stress symptoms. In my experience, the stillness and generative practices have worked the best to create self-awareness. Second, positive affect consistently showed a correlation with compassion satisfaction. I have found generative practices (visualization and felt senses) to be the most useful in changing mood states. I also feel that they are an easy progression in terms of teaching and learning.

I have chosen practices that will be helpful for in-the-moment situations as well as practices that are to be sustained over longer periods of time. An in-the-moment practice, for me, can be done anywhere instantaneously and unbeknownst to anyone around. For example, a practice that would be used in the moment is a practice called the Power of Pause, where the practitioner simply takes a momentary pause either to become aware of some beauty in the moment or to stop an unwanted reaction. It can be done while

[161] Maia Duerr, "The Tree of Contemplative Practices," The Center for Contemplative Mind in Society, accessed March 4, 2017, https://web.archive.org/web/20170308223228/http://www.contemplativemind.org/practices/tree.

conversing, driving, walking, or sitting quietly alone. This practice will be described in detail later in the chapter. A sustained practice, the way I am using it, requires a quiet place where the practitioner can take a few moments to become grounded. Once grounded, the practitioner can then begin to get to the heart of the practice. These practices can vary greatly but generally take anywhere from ten to forty-five minutes to perform depending on experience and the desired outcome. These practices aim at deeper introspection and/or a more profound connection to the collective consciousness or Sacred reality. I believe the combination of the two types of practices will provide the tools necessary to equip practitioners to handle most situations that they encounter.

REMEMBERING SACRED MOMENTS

The first practice I introduced is called Remembering Sacred Moments. This practice is a great introductory practice because it is not very difficult to perform yet it can yield immediate results, which I had hoped would offer the group a glimpse of the rewards that contemplative practices could offer the new practitioners and would get them excited about learning new practices. Remembering Sacred Moments was created by Dr. Frank Rogers, which he writes about in his book *Practicing Compassion,* as a means of getting grounded. Getting grounded is actually one of the invitations of the Compassion Practice, which is another practice that he created and it will be discussed at length later in this chapter.

This practice has five simple steps to follow. The first of which is to take several deep breaths and settle into an interior silence. Then, begin to recall moments that felt particularly sacred to you. They can be as simple as seeing an unexpected flower in a

crack in the sidewalk or as momentous as delivering your first child, so long as they were moments where you felt love, connection, joy, or full of life.[162] Allow one moment to emerge as the focus of your practice. Return to this moment in your mind. Remember as much as you can about this moment. Remember what was happening in your life at that time—remember where you were, whom you were with, and what you were doing. Try to remember all the sensations of the moment—how it felt, what it smelled like, the sounds, remember the vibrant colors and textures that you saw.[163] Recall what was so sacred or expansive about this particular moment. What did this sacredness feel like? Allow this feeling to engulf you and infiltrate every cell of your body.[164] Enjoy living in this sacred moment once again. Stay in this moment for as long as it feels right and when you are coming out of it, try to figure out if there is an invitation from the Sacred that you would like to take back with you to normal life.[165]

Dr. Rogers draws on The Spiritual Exercises from Ignatius of Loyola for this practice. St. Ignatius instructed practitioners to accurately narrate the history of whatever the subject chooses as the contemplation—some passage from the Bible, but to only go over the points with a brief summary explanation. This allows for more personalization. The person who is contemplating takes the history as authentic, reasons about it for himself or herself, and can discover something that will bring about a more personalized concept of the history either through his or her own reasoning or by allowing God's grace

[162] Rogers, *Practicing Compassion*, 57.
[163] Ibid.
[164] Ibid.
[165] Ibid., 58.

to enlighten the contemplation.[166] If the mind wanders, it is considered to be God directly communicating a message to the practitioner that deepens the connection with Jesus.[167]

In addition to being a great introductory practice, Remembering Sacred Moments has promise amongst animal welfare workers because it offers an escape from the weight of this work. It is often easy to worry about an animal that you encountered recently, or to lament the loss of an animal you were particularly attached to. It is also easy to focus on placing blame because of the condition of an animal or for the lack of care or responsibility a person takes for their animals. These heavy feelings can take a toll on any person who is constantly living with these thoughts. This practice allows an escape from these ugly moments and allows us to almost take a figmental vacation and return refreshed and invigorated. This would be a beneficial habit for animal welfare workers to start training themselves to get into so they are not constantly bearing the weight of these collective moments of negligence, irresponsibility, abuse, or loss.

THE POWER OF PAUSE

On its surface, The Power of Pause seems like an overly simple practice, but it requires quite a bit of awareness and a whole lot of restraint. Before I go any further, I need to mention that in my research I found several practices that are called "The Power of Pause." The practice I am referring to in this dissertation is the practice developed by Dr. Alane Daugherty. This practice has its roots in neurobiology. Without getting into

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[166] George E. Ganss, ed., *Ignatius of Loyola: The Spiritual Exercises and Selected Works* (New York: Paulist Press, 1991), 121.

[167] Brother Charles J. Jackson, interviewed by Heather McDermott, Personal Interview, Orange, April 9, 2013.

too much detail about the science behind it, as that is beyond the scope of this chapter, it has been proven that we can re-wire our brains to respond differently to stimuli.[168] This practice is designed to help re-wire our responses by simply pausing in the middle of our reactivity when we are triggered. Instead of instantly becoming reactive and overly emotional, this practice will help us to respond from a much more grounded state.[169]

The practice consists of three straightforward steps. When you find yourself having a very emotional reaction to something that has happened in your day—whether you find yourself angry at a spouse or child, brokenhearted over terrible news, or stressed out as you approach a deadline—disengage and focus on stopping the normal chain of reactivity.[170] Then take a few intentional and grounding breaths to help gain clarity.[171] Finally, reassess the situation after the pause, rather than when you are completely activated.[172] The more one does this practice, the more strongly their brain is being re-wired and eventually responding from a grounded space will become the primary reaction. Dr. Frank Rogers also makes mention of this practice in his book *Practicing Compassion*, as it is the first step in a practice he calls "The Compassion Practice."[173] While he does recommend getting grounded when we are hijacked by our emotions, he also suggests it as an in-the-moment breath prayer, which he encourages people to do

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[168] Alane Daugherty, *From Mindfulness to Heartfulness: A Journey of Transformation Through the Science of Embodiment* (Bloomington: Balboa Press, 2014), 68.

[169] Ibid.

[170] Ibid.

[171] Ibid.

[172] Ibid.

[173] Rogers, *Practicing Compassion*, 40.

randomly throughout the day, not just when activated, to lay the foundation of living in a grounded state.[174]

I really like this practice for animal caretakers for several reasons. For veterinarians and certain shelter workers, very often they are making life or death decisions, which comes with a range of emotions and this can help them make these big decisions from a more grounded perspective. For most animal caretakers emotions run high and low on a daily basis and it really takes a toll. This will give people a way to help regulate the rollercoaster of emotions. It is also an important step toward increasing compassion. Often situations are not what they seem, but you will never figure that out if you are reactive and quick to judge or if you are sad to the point of breaking down. I also like that this can be done any time, anywhere for a very brief time, yet done repeatedly, it will have a huge impact on the quality of the persons life because it will reduce extreme reactions.

THE BREATH PRACTICE

Another powerful practice that can be done at anytime and in any place is called the Breath Practice. Almost every contemplative path, among various traditions, begins with attention to our breathing.[175] It invites us to live in the present moment, deepen our awareness, and to feel our connection to all that is in our universe. The beauty of this practice is that it is not only simple, but it can be done when we are driving, sitting, standing, walking, praying or anything else we would like, though out in nature may be

[174] Ibid., 56.
[175] Rogers, *The Way of Jesus,* 48.

especially beautiful.[176] Also, while it is a common practice amongst various religions, it can be done without any religious overtones at all and will still be effective to religious and secular people alike.

The practice is simple. There are several subtle variations to this practice depending on one's religious orientation. A secular version will be reflected here, as that is how I taught it to the test group in the pilot study. Begin by noticing your breath. Make no attempt to control or change your breathing, simply bring your awareness to your breath. Release your mind of any thoughts and notice the air flowing in and out of your nostrils. As you are breathing, be conscious of the Sacred (this can be replaced with God, nature, the spirit, etc.) around you. Breathe this presence in and out. Feel the sacred energy inside of you. Be aware of how your body feels as you take it in and release it back out. Relish in the peaceful connection. If you feel an invitation to release something back into that space, offer it through your out-breath. When it feels right, slowly become more aware of your immediate surroundings and allow yourself to come out of the practice.[177]

Focusing so intently on our breath prevents other distracting thoughts from invading our mind and taking us away from the present moment. When we bring our attention to breathing in and out, we create a unity between our mind and our body

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[176] Thich Nhat Hanh, *Breathe Journal* (Berkeley: Parallax Press, 2011), 68, 175.

[177] My version as I taught it is a synthesis of Hanh, *Breathe Journal*, 175-6, Anthony de Mello's breath prayer in Anthony De Mello, *Sadhana: A Way to God, Christian Exercises in Eastern Form* (New York: Image Book Doubleday, 1984), 26-8, 36-7 and also in his book Anthony De Mello and William Dych, *Anthony de Mello: Writings (*Maryknoll: Orbis Books, 2007), 37.

allowing us to be present mentally and physically.[178] We are present for every breath and we become aware of our very real sacred connection.[179] This awareness allows us to grasp the Sacred in a space that transcends the words and images that necessarily distort the reality of the Sacred.[180] This creates another way, a deeper way of connecting. As Anthony de Mello explains in his book *Sadhana*,

> Notice how sharp is the hearing and the sense of touch of a blind man. He has lost his faculty of seeing and this has forced him to develop his other faculties of perception. Something similar happens in the mystical world. If we could go mentally blind, so to speak, if we could put a bandage over our mind while we are communicating with God, we would be forced to develop some other faculty for communicating with him—that faculty which, according to a number of mystics, is already straining to move out to him anyway if it were given a chance to develop: the Heart.[181]

This simple exercise can have such a profound impact, which will only deepen with practice.

Although this practice alone is powerful, it can be taken a step further in a practice called HEARTful or attitudinal breathing. This practice is virtually the same, except before we begin the practice we think of a desired state or outlook that we would like to achieve. For example, we may want to feel compassion, love, gratitude, clarity, or confidence.[182] Therefore, when we are engaged in the practice, while breathing, we calmly breathe in the felt sense (or if it is more helpful to picture an image we can do that instead) of the desired state we wish to manifest.[183] Our brain is unable to discern reality from something that is deeply felt, so when we do this our body shifts our biochemical

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[178] Hanh, *Breathe Journal*, 175.
[179] De Mello and Dych, *Writings,* 29.
[180] De Mello, *Sadhana*, 29.
[181] Ibid., 30.
[182] Daugherty, *Mindfulness to Heartfulness,* 276.
[183] Ibid.

state to become consistent with our desired outlook.[184] We can literally change our attitude or state of mind in a matter of minutes.

This practice is an integral part of the pilot study because it can be practiced while the caretakers are in the midst of their work, several times a day if necessary. These people chose this line of work because they already have a profound connection with these animals, this can serve to deepen this connection, bringing it to the spiritual level. I firmly believe that a good amount of healing can come from this practice. HEARTful breathing has the potential to heal in the moment and in the long run, as it can help snap someone out of an angry, sad or frustrated state and transform that to a calm or compassionate outlook. Perhaps more importantly, when practiced regularly, it would be an extremely effective means to battle depression, which is rampant amongst this population.

FOCUSING

Eugene Gendlin, a professor of Psychology at the University of Chicago, and some of his colleagues were curious as to why psychotherapy wasn't more successful. They decided to record and analyze therapy sessions with their clients, and after careful analysis, found that the clients that were successful in therapy had a distinct inner process, which Gendlin dubbed "focusing." He was then able to develop a method of teaching this skill to others.[185]

Focusing is based on the premise that the body has an inherent knowledge, a physical experience, of one's situation and this awareness influences our lives and can

[184] Ibid.
[185] Eugene T. Gendlin, *Focusing* (New York: Bantam Books, 1982), 3-4.

help us reach our goals.[186] Gendlin refers to this bodily awareness as a "felt sense."[187] If a felt sense is approached in the right way, it can shift, resulting in an overall change in feeling and demeanor.[188] To best illustrate a felt sense, Gendlin provides a relatable example. Imagine you are on your way to the airport and you suddenly get the feeling you have forgotten something but you have no idea what it is. You make it to the airport and board the plane, all the while having an incessant nagging feeling that you are missing something. You wrack your brain, "Did I forget to RSVP to my friend's party?" No, that's not it. You come up with various scenarios, none seem fitting, but some give you the feeling that you are getting warmer. Sometimes, out of nowhere, you get the feeling it's going to come to you, but then just as quickly as it came, it has disappeared. You have all but given up, when suddenly you remember, "The pictures! I forgot the pictures I wanted to bring!" Your body agrees, it feels right and that nagging feeling that you have had since you walked out the door as dissipated and has been replaced with relief that you finally figured it out.[189] That nagging feeling that you forgot something and then the feeling of confirmation that you remembered what you left at home is a felt sense, a bodily awareness. The feeling of relief that replaced the nagging feeling is the bodily shift that Gendlin refers to.

Focusing is designed to teach practitioners how to pay attention to these felt senses and then to teach them how to acknowledge the sense in a way that will provide the same type of relief as the example above. In order to achieve this, Gendlin designed a six-step process. The first step is clearing a space. Next, relax, turn inward, and see what

[186] Ibid., viii, 37.
[187] Ibid., 37.
[188] Ibid.
[189] Ibid., 45.

surfaces when you ask yourself how your life is going and what the main thing in your life is at that moment.[190] After taking an inventory of what has come up, choose only one issue to focus on and pay attention to where you are feeling things when that issue comes up. Feel the whole aura around the issue.[191] The next step is to let a word, phrase or image come up and see how each fits to embody the general feeling of the issue. Try to figure out if it feels like a hit or a miss.[192] Then, go back and forth between the felt sense and the word or image and see how they resonate with each other. Continue doing this until it feels just right and the felt sense has been captured with the word or image.[193] Next, while sensing the quality from the last step, ask what it is about the problem that makes this quality (of whatever the word or picture conveys). Ask what is in that sense. Continue asking questions until you feel a shift, similar to the relief of remembering the pictures.[194] Finally, receive whatever comes with the shift in a friendly way and stay with it for a while.[195]

After teaching and practicing Focusing, Ann Cornell, a student of Eugene Gendlin's, began to realize that her process evolved into a different way of focusing. While the premise is still the same, she found that removing some of the steps and changing her mindset to become more accepting and inclusive proved to be more successful for herself and her students.[196] She eliminated the need to clear a space before

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[190] Ibid., 50.
[191] Ibid.
[192] Ibid.
[193] Ibid., 50-1.
[194] Ibid., 51.
[195] Ibid.
[196] Ann Weiser Cornell, *The Radical Acceptance of Everything: Living a* (Berkeley: Calluna Press, 2005), 29.

beginning.[197] She also believed that felt senses could arise from parts of the body outside of the trunk of the body and that felt senses could manifest in physical symptoms like knee pain, two ideas that are not supported by Gendlin's teachings.[198] Further, Gendlin treated the inner critic as an "intractable 'superego'" that was never kind and should in turn be treated disrespectfully, whereas Cornell believed that the inner critic was just a part of the process and a way that the body chose to express itself and that it should be treated with compassion.[199] Along the same lines, Gendlin believed distractions should be set aside, while Cornell believed there was no such thing as distractions, but that intrusive thoughts were just part of the process and they needed to resonate first.[200]

Perhaps the most important development Cornell made is the idea that feelings and felt senses do not define us, they are not who we are, but rather they are aspects of us.[201] For example, when people say things like, "I am in pain and I'm trying not to be" instead of "something inside of me is in pain and something else inside of me wants to stop feeling pain," this is called *identification*, which Cornell believes is the root cause of suffering.[202] Instead, these conflicting parts need to be recognized as aspects of the person, rather than the person. Each part needs to be recognized for what it is and how *it* experiences the situation.[203] When one recognizes both aspects for what they are, they are in a new place that is not on one side or another, called *Presence.* This is where

[197] Ibid., 31.
[198] Ibid.
[199] Ibid.
[200] Ibid., 35-6.
[201] Ibid, 66-7.
[202] Ibid., 44.
[203] Ibid., 66-7.

change can happen.[204] Focusing teaches people to be in relationship with his or her feelings, rather than to be *in* his or her own feelings.[205]

Animal welfare workers feel a wide variety of emotions as a result of their endeavors. Focusing would be a valuable practice for animal welfare workers because it provides a tool to create emotional awareness without the practitioner being consumed by those emotions. It is a good gateway practice into some of the more intense meditations, like the Compassion Practice and Internal Family Systems Practices because it is a fairly easy meditation for those who have little to no experience with contemplative practices and it creates a safe distance between the practitioner and his or her emotions while establishing an attitude of inclusiveness for all feelings.

INTERNAL FAMILY SYSTEMS

Psychotherapist, Dr. Richard Schwartz, founded the Internal Family Systems (IFS) Therapy method, which extends the ideas and methods from the intrapsychic process and the family process.[206] It is the synthesis of two paradigms that had never been combined—the multiplicity of the mind and systems thinking.[207] In short, Schwartz believes that we are comprised of internal "parts," sometimes called subpersonalities, each of which has their own feelings, beliefs, motivations, and memories.[208] Underlying

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[204] Ibid., 26.

[205] Ann Weiser Cornell, *The Power of Focusing: A Practical Guide to Emotional Self-Healing* (Oakland: New Harbinger Publications, 1996), 16-7.

[206] Richard C. Schwartz, *Internal Family Systems Therapy* (New York: Guilford Press, 1995), Introduction, Kindle.

[207] Ibid., chap. 1.

[208] Jay Earley, *Self-Therapy: A Step-by-Step Guide to Creating Inner Wholeness Using IFS, a New, Cutting Edge Psychotherapy* (Minneapolis: Mill City Press, 2009), 5, 17.

these different parts is the Self, which is wise, deep and open.[209] Since these parts are like having little people inside, people can communicate with them and help them communicate with one another.[210] IFS is based on the premise that we are innately equipped to solve our own problems and heal from traumas we have experienced, but our inner lives are often unbalanced and prevent us from accessing the resources necessary to accomplish this.[211] Applying the idea in family therapy that people are competent but are constrained by their family structure so that structure must be changed, Schwartz believes the same theory applies to our internal family structure.[212]

Each part has a role to play in one's life and tries to advance our interests in some way, unfortunately sometimes they are a little misguided and they actually have the opposite effect.[213] Human systems are organized into three groups: exiles, managers, and firefighters.[214] Exiles have been hurt, humiliated, frightened or shamed in the past. These parts carry emotions, memories, and sensations.[215] Managers are focused on keeping people functional and safe so they try to maintain complete control of one's internal and external worlds. These parts might criticize our appearance or performance in hopes of improving the way we look and act, or these parts might put other's needs before our own.[216] Managers are protecting our exiles by keeping them locked away so the person does not have to feel the pain that the exile bears. When exiled parts do flood

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[209] Ibid., 7.
[210] Ibid., 17.
[211] Schwartz, *Internal Family Systems*, chap 1.
[212] Ibid, Introduction.
[213] Earley, *Self-Therapy,* 18.
[214] Schwartz, *Internal Family Systems*, chap. 2.
[215] Richard C. Schwartz, "Releasing the Soul: Psychotherapy as a Spiritual Practice" in *Spiritual Resources in Family Therapy,* ed. Froma Walsh, 223-39 (New York: Guilford Publications, 1999), 225.
[216] Ibid.

a person with emotion, firefighters jump into action and try to extinguish the inner flames of feeling as quickly as possible. They are highly impulsive and will do whatever it takes to override or disassociate the person from the exile's feelings, such as binging on sex, drugs, alcohol or work.[217] A person is designed to protect the Self at all costs, which is what these parts are attempting to do but they do not understand that we have better coping mechanisms.[218]

The Self is who we are at our very core; for Schwartz, it is analogous to the soul.[219] It is our being's natural leader, but the problem is our various parts try to protect the Self, which causes them to leave their preferred roles and battle with other parts to take over the lead, which results in an imbalanced system.[220] The goal of IFS is to communicate with these parts and teach them to learn to trust the Self, allowing the roles to convert back to their healthy roles, leaving the Self in full leadership.[221] As Schwartz explains, "When the Self is unconstrained, it will lead in the sense of caring for and depolarizing the parts in an equitable and compassionate way; leading discussions with the parts regarding major decisions in selecting the direction of the person's life; and dealing with the external world."[222]

It is worthy of note that in 2004, Cornell and her colleague discovered Richard Schwartz and IFS. While Cornell admits there are "amazing similarities" and says that Schwartz's writings helped distinguish "a reactive part that doesn't seem to care about the consequences of its actions, and a traumatized part whose unhealed pain provides the

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[217] Ibid.
[218] Schwartz, *Internal Family Systems*, chap. 2.
[219] Schwartz, "Releasing the Soul," 225.
[220] Schwartz, *Internal Family Systems*, chap. 2.
[221] Earley, *Self-Therapy,* 29.
[222] Schwartz, *Internal Family Systems*, chap. 2.

source and the reason for the out-of-control behavior of the reactive one."[223] However, she felt that the concept of Self and Presence were interestingly different.[224] They did not adopt his methodology and Cornell says there are still interesting differences between their view and his, though she does not go into any further detail.[225]

Practices utilizing the IFS framework can be advantageous to those often working with the pain and suffering of animals. Veterinarians struggle when clients could easily help their sick or injured pet but choose not to treat, conversely, they struggle when clients choose to continue treatment when the animal is irremediably suffering, and finally they have a really hard time dealing with the emotional effects performing euthanasia. These issues are usually amplified in the shelter setting where irresponsible owners abandon their pets into an already overcrowded system also affect employees and volunteers. IFS can help teach these people how to become Self-led so that they can begin healing these traumas given the tools that they are innately equipped with.

THE COMPASSION PRACTICE

The final practice I would like to use in a program designed to combat compassion fatigue is aptly titled The Compassion Practice. Influenced by prominent psychologists such as Carl Jung and Marshall Rosenberg, Dr. Frank Rogers developed this practice specifically to help people cultivate an attitude of compassion toward his or her enemies, or at least those that the practitioner finds it difficult to feel compassion for. The Compassion Practice is unique in that it recognizes that before we can foster a

[223] Cornell, *Radical Acceptance,* 74.
[224] Ibid,, 74-5.
[225] Ibid., 75.

compassionate attitude for another whom we have a difficult time feeling a shred of compassion for (hereafter referred to as an adversary), we must first attend to our own healing and spiritual practices.[226] In other words, we often fail to see others on their own terms, but rather, we see them through our filtered lenses, which are colored by our own needs, desires, sensitivities, and agendas.[227] We need to become aware of our wounds that color our lenses so we can approach the other with an open mind and attitude so we can relate to them as they are, rather than who we think they are.

Perhaps it is best to understand the Compassion Practice by first recognizing that when we are agitated by another's behavior, this reaction inside of us is a cry signaling that there is an unmet need inside of us that needs attending to.[228] Dr. Roger's likes to think of it as something inside of us waiving a flag to alert us to the fact that we need to pay attention to something inside that needs to be heard, so he came up with an acronym, FLAG, to show us what these interior movements are rooted in.[229] We are reactive either because there is a fear, a longing, an aching wound, or a gift obstructed.[230] There may be a fear inside of us that we are going to be rejected, ridiculed, violated, or attacked or there is a longing for renewal, freedom, love, or life. We may be protecting a wound we suffered in the past and we are doing everything we can to avoid feeling that pain again. It is also possible that we have a talent or a gift inside of us that is striving to get out.[231] When we recognize that our undesirable behavior is actually something inside of us just trying to protect ourselves, we can hold that place inside of us in a compassionate

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[226] Rogers, *Practicing Compassion*, 23.
[227] Ibid.
[228] Ibid., 71.
[229] Ibid.
[230] Ibid.
[231] Ibid.

embrace and try to meet the hidden need, rather than judge it. Just as our reactiveness is really just protection of a vulnerable place inside of ourselves, we need to recognize that when others are rude, overly emotional, insensitive, or a whole host of behaviors that are hurtful, they too are just protecting a vulnerable part inside of them. The Compassion Practice is designed to nurture a compassionate connection so that we can open ourselves to seeing that vulnerability within our adversary and want not to exploit it, but to hold it with a sacred embrace and we desire to help soothe that unmet need in the other.

The practice is comprised of four steps. We must first catch our breath, which essentially means we need to gain a little distance from whatever is going on in our lives and get grounded.[232] Then, we need to take our PULSE. PULSE is an acronym, which will be discussed in detail in the next paragraph, but what we need to do in this step is cultivate compassion for ourselves by taking a "U-turn" and "connect empathically with the cry of the soul hidden within his or her emotions and behaviors."[233] Next, we take the other's PULSE by repeating this step but focusing our compassion on the person we are having a difficult time with.[234] Lastly, now that we are in a grounded place we need to decide what to do—what is the best course of action to heal suffering and promote the flourishing of all parties involved?[235]

For Rogers, every experience of compassion must include six steps, which he refers to as PULSE. PULSE is an acronym for: Paying attention, Understanding empathically, Loving with connection, Sensing the sacredness, Embodying new life, and

[232] Ibid., 19.
[233] Ibid.
[234] Ibid.
[235] Ibid.

Act.[236] Paying attention refers to perceiving others with a "nonjudgmental, nonreactive clarity.[237] This is what was mentioned above—seeing people on their terms, not through the cloud of your preconceived notions. When we are agitated by another's behavior, it can sometimes be difficult to connect with them, but we will soften if we can take a step back and realize that he or she is acting that way because of a deep wound that he or she is trying to protect because he or she does not want to suffer through a trauma again. That is what Rogers means when he writes about understanding empathically.[238] One loves with connection when this love is nonjudgmental, loving, and all-embracing.[239] Sensing the sacred means tapping into the sacred space that has the capacity to hold and heal all wounds.[240] We embody new life when we are truly compassionate because compassion desires restorative healing for not only oneself but for others.[241] The final step in Roger's PULSE is to Act, to act in a nurturing way that fosters healing, kindness and care.[242]

As has been mentioned many times before, animal caretakers are often put in positions where the first and easiest reaction is a rush to judgment. This practice is absolutely essential to rewiring their systems so that their knee-jerk reaction becomes that of connection and understanding. Education and change will not come from a place of pathologizing another's actions. It will come from a genuine desire to see the other act from his or her spiritual center. It is perhaps more important for the welfare worker to

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[236] Ibid., 23-6.
[237] Ibid., 27.
[238] Ibid., 24.
[239] Ibid.
[240] Ibid., 27
[241] Ibid.
[242] Ibid.

foster this same loving relationship to *all* aspects of themselves. So much of this work involves weighted decisions, costly mistakes, and unintended reactions to circumstances. There needs to be a safe place where these things can happen and be acknowledged, forgiven, and restored and the Compassion Practice leads practitioners down that path.

CONCLUSION

To conclude, I assert that Remembering Sacred Moments and the Power of Pause are really helpful in the moment practices for veterinarians, shelter workers and volunteers, networkers, and animal rescuers. Both practices help the practitioner get grounded and both can be useful to stop the chain of reactivity. The Breath Practice is versatile and can be useful in the moment and when used as a sustained practice. It is also serves as a good meditation to help transition the group to the more advanced practices that will follow. Focusing, Internal Family Systems, and the Compassion Practice require more experience with contemplative prayers, but have great potential to heal deep wounds. These practices will help create emotional awareness and will offer different techniques for practitioners to be in relationship with their wounded parts without being hijacked by the pain they feel. The order of these practices is designed to create awareness by building on the previous practice allowing the practitioners to become more familiar with and trusting in the process. I suspect that the group of animal welfare workers who learn these practices and stick with them despite the potential initial discomfort will have a spiritual vitality that will help them overcome compassion fatigue and allow them to remain in their caregiving roles long-term. It is also my hope that as

the group takes this journey together they create a spiritual intimacy, or bond, with each other that will serve as a support group for their future endeavors

CHAPTER 3

NEUROPHYSIOLOGY

Now that the practices have been introduced we must understand what they do to our bodies so we can understand why Dr. Daugherty and I chose to monitor the physiological data that we did. It will also help to interpret the results of the study. This chapter will investigate the body's neurophysiological response to trauma and stress as well as the likely effects of the six practices that were taught in the pilot study. To the best of my knowledge there is no literature specifically addressing compassion fatigue from a neurophysiological perspective, though there is substantial literature addressing the body's response to stress. More specifically, the neurophysiology of Post Traumatic Stress Disorder (PTSD), which is very similar to compassion fatigue, has been researched extensively and will be the focus of this chapter. I hope that this information can be used as a basis to conduct further research explicitly studying the effects of compassion fatigue amongst this population so researchers can distinguish its effects from the effects of PTSD.

THE STRESS RESPONSE

We first need to understand the body's reaction to stress so we can better understand what the six practices that I have chosen do to the body to relieve compassion fatigue amongst animal caretakers. It will also allow us to better comprehend which practices should be used in specific circumstances based on our body's response to the triggers present in those moments. It is important to note that there has been a conflation

of terms used when talking about compassion fatigue amongst animal welfare workers that researchers now take great pains to try to separate and explicate. Terms such as stress, burn out, compassion fatigue, and PTSD now have very specific definitions. While many of their causes and symptoms are similar and may overlap, they are distinct conditions. However, stress is at the foundation of all of them.

The autonomic nervous system (ANS) is at the center of the body's response to stress and is responsible for the fight, flight or freeze response.[243] The ANS has two branches, the sympathetic nervous system (SNS) and the parasympathetic nervous system (PNS), which balance each other (when one is more activated the other is more suppressed) to maintain homeostasis. The SNS activates under stress and the PNS activates during rest and relaxation, although it is also active during some states of distress, such as sadness. The PNS is elevated to hyperarousal when we feel shame, embarrassment, anger (not rage), and extreme terror.[244] When the SNS is primarily aroused, the body prepares for fight or flight, so we breathe more rapidly, our pupils dilate, blood pressure rises, blood flows away from the skin and viscera and goes to the muscle instead, and our digestion slows down or stops altogether.[245] Each of these responses plays a role in allowing our body to be more effective in fighting or running from the perceived threat. For example, breathing increases our oxygen supply, while our rapid heart beat disperses the oxygen even faster and combined with our increased

[243] Babette Rothschild and Marjorie L. Rand, *Help for the Helper: The Psychophysiology of Compassion Fatigue and Vicarious Trauma* (New York: W.W. Norton, 2006), 98.

[244] Ibid.

[245] Ibid., 98-9.

blood flowing to the muscles, we are almost instantly ready to run or to physically fight.[246]

There are times, though, that the body neither fights nor runs but freezes instead. There are conflicting theories explaining why the body freezes. On the one hand, it is believed that during extreme danger, the PNS and the SNS are hyperaroused at the same time, which overwhelms the system and results in the body freezing.[247] On the other hand, Stephen Porges developed the polyvagal theory, which holds that the freeze response is mediated by the dorsal branch of the vagas nerve.[248] The freeze response is helpful in situations where it is advantageous to play dead, like a mouse caught by a cat,[249] or where a predator easily reacts to movement but finds it difficult to spot prey that does not move, perhaps like a coyote stalking prey. Trauma may also temporarily shut down the hippocampus through dissociation. During extreme trauma with no chance of escape, we not only release high levels of memory blocking hormones but we may also provide our own escape mechanism by narrowly focusing on a nontraumatic aspect of the environment or an internal thought.[250]

The part of the brain that controls the ANS is known as the limbic system, which is responsible for the management of all levels of stress.[251] The limbic system is known as the emotional part of the brain and is considered to be more primitive than the more

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[246] Ibid., 99.
[247] Ibid., 98.
[248] Ibid,, 100.
[249] Ibid., 99.
[250] Daniel J. Siegel, *Mindsight: The New Science of Personal Transformation* (New York: Bantam Books, 2010), 157-8.
[251] Rothschild and Rand, *Help for the Helper,* 99-101.

evolved neocortex, which is responsible for conscious awareness.[252] This is important because the neural connections leading from the limbic system to the neocortex are stronger and more numerous than leading in the other direction, which means information processed by the limbic system and sent to the neocortex (where it is consciously processed), is stronger and quicker than if it was going in the other direction.[253]

Within the limbic system, there is a small almond-shaped structure called the amygdala, which stores emotional memory and is often activated as the body's first response to a perceived threat and then activates the physiological stress response.[254] Immediately after perceiving a threat, the amygdala sounds the alarms and within milliseconds, the nearby hypothalamus produces a hormone called corticotrophin releasing factor (CRF), which then signals the pituitary and adrenal glands to release epinephrine (adrenaline), norepinephrine, and cortisol into the blood stream. These hormones then create a heightened state of alertness and supercharge the circuitry involved in memory formation. The amygdala then tells the body to make a strong memory of the event.[255] The more intense the emotional response to the perceived threat, the stronger the physical response.[256] Once the memory is stored, the amygdala is quick to activate in similar situations. This can happen even with a low-level trigger, which can result in a reaction that is not appropriate for that particular event.[257] When the perception reaches the prefrontal cortex, the response can be tempered if it is

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[252] Alane Daugherty, *The Power Within: From Neuroscience to Transformation* (Dubuque: Kendall/Hunt Publishing Company, 2008), 42.
[253] Ibid.
[254] Ibid., 41, 52.
[255] Ibid., 41.
[256] Ibid., 51.
[257] Ibid., 41.

inappropriate.[258] Because the limbic system can act independently of the neocortex, all of this can happen without any conscious awareness.[259]

There are several stress hormones, such as epinephrine and norepinephrine, but cortisol is considered the primary stress hormone because it is the most damaging.[260] Cortisol falls into a class of stress hormones released through the adrenal cortex called glucocorticoids. In fact, it is the primary glucocorticoid.[261] While cortisol can be helpful in small amounts, which helps prepare the body for fight or flight, it is detrimental in excess. It is associated with increased levels of blood sugar, storage of body fat, and it damages our ability to think, reason, and retrieve information.[262] In the long-term, it is associated with high blood pressure, heart disease, diabetes, and anxiety disorders.[263] Cortisol is taken into the body via receptor sites on the surface of target cells and when the body remains stressed, it creates more receptor sites, which then stimulates more cortisol production.[264] The elevated levels of cortisol then become the body's new homeostasis.[265]

PTSD results when the body's system that is responsible for appraising and responding to threat becomes dysregulated.[266] When this happens, the body reacts as though a past trauma is continuing to happen in the present, which is reflected through

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[258] Ibid., 42.
[259] Ibid.
[260] Ibid., 52.
[261] Ibid.
[262] Daugherty, *Mindfulness to Heartfulness,* 92.
[263] Ibid.
[264] Daugherty, *Power Within,* 52-3.
[265] Ibid. 54.
[266] Louis J. Cozolino, *The Neuroscience of Psychotherapy: Healing the Social Brain,* 2nd ed. (New York: W.W. Norton & Co., 2010), 263.

hyperarousal, intrusion, and avoidance.[267] Hyperarousal reflects a dysregulation in the amygdala and ANS and manifests as an exaggerated startle reflex, agitation, anxiety and irritability.[268] Intrusions, such as flashbacks, occur when activations of subcortical systems are activated by events that are similar to previous trauma. During these times, past traumas are experienced as though they are happening in the present moment. The person experiencing an intrusion literally has no distance from the trauma in time or place.[269] Avoidance presents as withdrawing from others, denial, repression, alcohol and drug abuse, and in extreme circumstances, disassociation and amnesia.[270] This allows for short-term anxiety reduction while maintaining the lack of neural network integration, which perpetuates the illness and actually promotes a continual loop of unconscious self-traumatization, coping, and exhaustion.[271]

Sadly, there can be an even more severe addition to stress and trauma—self-harm. Some people may be addicted to stress. They may feel anxious in normal life and more calm and at peace in risky or life-threatening situations.[272] During moments of normal life, their psyches may project fearful experiences, keeping them in a state of vigilance and fear. This may motivate them to create more stress, making their already traumatized psyche more vulnerable to new trauma.[273] This new trauma would stimulate the production of endogenous opioids that would lead them to feel calmer, more competent,

[267] Ibid.
[268] Ibid.
[269] Ibid.
[270] Ibid, 264.
[271] Ibid.
[272] Ibid., 279.
[273] Ibid.

and in control.[274] Endogenous opioids may play a role in self-harm and suicide, as research has shown that the frequency of self-harm decreases when patients are given drugs to block the effects of endogenous opioids.[275] This suggests that the analgesic effects of these morphine like substances may account for reports of feeling a sense of calm and relief after cutting, burning, or otherwise injuring oneself.[276]

These reactions are damaging enough on their own but even more troubling, there is a famous saying, "nerves that fire together wire together."[277] This means that the more we do the same thing or react in the same way, the synapse patterns that are firing in our brains begin to establish a neural network, which gets stronger and stronger and begins to be hardwired, creating more of the same.[278] Think of it like a game trail—the first time an animal takes a certain path the animal begins to clear a path in the brush, making it easier for the next animal to come along and follow that path rather than fighting the unpaved foliage. Eventually, the path becomes more and more distinct and all animals begin to use the trail because it is much faster and more efficient. The neural pathways function similarly making these reactions quicker and easier each time they encounter a stressor, making this the body's go-to method of coping.

The mood congruency hypothesis explains why we do this. According to the mood congruency hypothesis, "our current mood state determines the emotional memory response patterns activated deep within out brains."[279] Furthermore, there is another related idea that affects us called dependent recall, which holds that "we are much more

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[274] Ibid.
[275] Ibid.
[276] Ibid., 280.
[277] Daugherty, *Power Within,* 59.
[278] Ibid.
[279] Ibid., 95.

capable of remembering learned information when we are in the same mood state as we were when we originally learned that information."[280] An example demonstrating these ideas that we can all likely relate to is when we wake up fresh and ready to start a new day when suddenly something unexpectedly goes wrong, maybe we spill coffee on our shirt on the way to work. Then get to work and notice the coffee pot is out of the coffee that you need to survive the morning. That would be fine every other day, but today you are late and you just do not have the time to make a fresh pot before your meeting. Suddenly everything that could possibly go wrong has gone wrong and at the end of the day you stew on how terrible of a day you had and how much you just want to go to bed and wake up to a new day. In all likelihood, your day was just an average day but because you spent your time focusing on all the negative aspects of the day you only noticed the all of the things that went wrong.

BREAKING THE CYCLE

This may sound discouraging but the mood congruency hypothesis just may be the ticket back to health for those suffering from PTSD. Armed with this knowledge, it seems that the key to healing may be teaching those suffering to recognize when they are in a negative frame of mind to stop and take a step back, reset their physiology, and eventually replace it with a positive mindset so that their physiological responses will trigger positive responses. As a matter of fact, until relatively recently it was believed that our response patterns were basically set in stone. However, neuroscientists discovered that the human brain has the ability to change in structure and function every

[280] Ibid.

time we have an emotional reaction or focus our attention and feelings on a specific state of mind as our neural firing patterns strengthen in those areas and create more of that state.[281] Going back to the idea of the game trail, lets pretend a food source dried up at the destination of the first trail, the animals would not keep taking that trail and all would eventually just give up when it failed to provide nourishment. Instead, they would begin to pave a new trail to find a more abundant offering. It would be difficult at first, of course, breaking branches and traveling on unsteady ground but eventually a new trail would form and would become easy to access.

As I mentioned above, sometimes the best thing we can do while in the middle of a downward emotional spiral is to literally just *stop* and take a step back. When we do this we not only stabilize our biochemical response, we also break the associative memory neural nets that lead to our standard reactive patterns.[282] Once we have stopped this process we can begin to rewire our bodies to respond in more productive ways and begin to establish more grounded responses to triggers.[283]

THE PSYCHOPHIOSOLOGICAL RESPONSES OF THE SIX PRACTICES

I have included the Power of Pause as one of the practices I would like to teach animal welfare workers in the curriculum to mitigate compassion fatigue. Animal caretakers face so many triggers regularly that elicit strong emotional responses on a daily basis that this practice shows great promise. For example, the next time a veterinarian finds himself or herself on the receiving end of a client's tantrum for running

[281] Ibid., 8.
[282] Daugherty, *Mindfulness to Heartfulness*, 107.
[283] Ibid., 107.

expensive diagnostics that produced no viable explanation of a pet's illness, or a shelter worker watches the staff's favorite and most social dog go home with a careless adopter that wants a guard dog for their junkyard, when he or she feels himself or herself getting angry or feeling defeated he or she immediately stops. He or she then takes a couple of breaths and steps away from the situation for a moment, then reassesses the situation from a less reactive state.[284] This will lay the groundwork for creating more spiritually rejuvenating response patterns.

The next practice I have chosen is called the Breath Practice and is truly foundational for the rest of the suggested practices. To engage, one becomes aware of his or her breath without controlling or changing it at all. Simply notice the air flowing in and out. Andrew Newberg and Mark Robert Waldman recommend breathing through your nose, as it increases the release of nitrous oxide within the body. This improves lung and circulatory system function and may even help lower anxiety.[285] Empty your mind of all thoughts and distractions. If distractions come up, simply be aware of their presence and without judgment refocus on your breathing. Then, bring your awareness to the Sacred around you. Breathe this presence in and out and feel the Sacred energy fill your body; notice how your body feels. Rest in the peace of this Sacred presence.[286]

When we engage in this practice we cause biochemical shifts that reduce cortisol, increase the production of oxytocin and the neurotransmitters that are responsible for

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[284] Ibid., 68.

[285] Andrew B. Newberg and Mark Robert Waldman, *How God Changes Your Brain: Breakthrough Findings from a Leading Neuroscientist* (New York: Ballantine Books, 2010), 180.

[286] My version as I taught it is a synthesis of Hanh, *Breathe Journal*, 175-6, Anthony de Mello's breath prayer in De Mello, *Sadhana,* 26-8, 36-7 and also in his book De Mello and Dych, *Writings*, 37.

feelings of connection and a positive outlook.[287] Our brain and body quiets and the pattern of our heart waves becomes smoother and more coherent as they travel from through the vagal nerve to the amygdala. The amygdala then sends a message telling our body to activate a calm and connected system that is open and engaged.[288] This slow focused breathing increases dopamine levels in our brain, creating a pleasurable experience. It also lowers the amount of carbon dioxide in the blood, which lowers blood flow to the brain and decreases cognitive activity, making it easier to clear our minds.[289] It is believed that mindfulness may also stimulate growth of the resonance circuits, a cluster of neurons that include the middle prefrontal areas and they allow us to resonate with others as well as regulate ourselves.[290] When we notice our thoughts but do not engage in them, our frontal lobe consciousness increases to the point that it suppresses the emotional circuits in our brain, which causes feelings of anxiety, irritability, and depression to subside.[291] Perhaps one of the most important neurological benefits is that it seems that our body increases oxytocin production when we breathe slowly.[292]

Oxytocin was first regarded as the "bonding hormone" because it is released during breastfeeding and childbirth.[293] We now know oxytocin is also produced through a sense of gratitude, caring touch, moments of deep connection, time in nature, massage, meditation, prayer, implicit or explicit memories steeped in heartfulness, music, imagery,

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[287] Daugherty, *Mindfulness to Heartfulness*, 164.
[288] Ibid., 164-5.
[289] Newberg and Waldman, *How God Changes,* 179-80.
[290] Siegel, *Mindsight,* 86.
[291] Newberg and Waldman, *How God Changes,* 173.
[292] Daugherty, *Power Within,* 240.
[293] Ibid., 116.

and creativity that elicits deep emotion,[294] and even during human and animal bonding.[295] Oxytocin lowers our stress and anxiety by blocking the effects of cortisol.[296] It is also associated with the release of endorphins, which act as the body's natural morphine and opiates. Further, it influences and is influenced by dopamine and serotonin, which are neurotransmitters that are associated with positive mood states.[297] It is also believed that oxytocin is correlated with lower blood pressure, pain relief, increased learning, and feelings of well-being, calm, and quiet.[298] Just as the body does with cortisol, the more frequently oxytocin is produced, the more receptor sites with an affinity for oxytocin and similar hormones are produced, creating a new baseline with lower levels of stress.[299]

The Breath Practice is very helpful in creating a calm and peaceful state of being but sometimes this is not enough and needs to be taken a step further to a practice that Dr. Alane Daugherty created called HEARTful Breathing. This practice is virtually the same, except before we begin the practice we think of a desired state or outlook that we would like to achieve and we intentionally cultivate that feeling. For example, we may want to feel compassion, love, gratitude, clarity, or confidence.[300] When we intentionally cultivate a positive feeling state, we are using the cognitive part of our brain to engage our limbic system in a healing experience. Using these two different parts of the brain causes our brain to become more integrated, and our biochemistry shifts to match our felt state so it propagates a genuine state of heartful engagement, which causes the electrical

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[294] Daugherty, *Mindfulness to Heartfulness,* 144.
[295] Alane Daugherty, *Power Within,* 118.
[296] Ibid., 54.
[297] Ibid., 116.
[298] Ibid., 117.
[299] Ibid., 54.
[300] Daugherty, *Mindfulness to Heartfulness,* 276.

patterns that connect our heart to our brain to become more coherent.[301] It is absolutely critical that we *feel* these states, rather than just analytically think about them. When we feel, we engage the amygdala, which encodes new positive emotional memory deep in the reactive parts of our brain.[302] Routinely experiencing these shifts has shown to literally rewire our brains and change the electrical pattern of our hearts.[303]

The nice thing about the Breath Practice is that it can be either an in-the-moment practice or a sustained practice. For example, lets say a shelter staff member is working the intake line when a man and his young daughter bring in a box of five-week-old kittens to surrender to the shelter because it was an accidental litter and he no longer wants the responsibility of caring for so many cats. The staff member informs the man and his daughter that the kittens are too young for the shelter to take without their mom and that if they are left there the shelter will have no option but to euthanize the kittens. With little more than a shrug the man says he doesn't want them and walks away, his daughter trailing behind. Feelings of sadness and anger fill the shelter worker.

This would be a perfect time to engage in The Power of Pause and then to take a couple of minutes and begin the Breath Practice. The shelter worker can continue the practice for a few moments until he or she begins to feel calm and grounded again. The Breath Practice can also be used at home to help mediate overwhelming feelings of sadness or anxiety from dealing with these situations daily. These practices can be done for twenty to forty minutes instead of just a couple of minutes. This will really help

[301] Ibid., 166.
[302] Daugherty, *Power Within,* 120.
[303] Ibid., 46.

practitioners cultivate a sense of awareness and will encourage new ways of coping with work stress.

Another practice that I think will be really helpful is Remembering Sacred Moments. This is practiced by first getting grounded. Once settled, recall moments that felt sacred to you, they can be simple mundane moments or they can be life-changing moments. Choose one moment that particularly speaks to you at the time you are practicing it. Try to remember that moment in vivid detail—remember the smells, the taste, the colors, the feel of your surroundings. What is it about this moment that feels so sacred? Immerse yourself in it. Enjoy living in this moment again. When you are ready, gently return to the present moment.[304] I began the course with this practice because it is easy and so that the class could get a glimpse of how uplifting contemplative practices can be and how good they can make you feel. I also hoped it will encourage them to practice often outside of our meetings. For those that were truly committed to the study, it could have provided them with a tool right off the bat that allowed an escape from any negative feelings they had between the first and second week until we met again.

Engaging in guided imagery practices, which are those that use pleasant memories to cultivate a deep state of relaxation, has proven to be an effective method to reduce pain and to lower anxiety and depression in patients that have just had a medical or surgical intervention.[305] I see no reason why this wouldn't also apply to those suffering from high levels of stress and anxiety due to other trauma. In fact, a study conducted by Newberg and Waldman reported that brain scans revealed that guided imagery reduced the symptoms of those suffering from PTSD by reducing the activity in the emotional centers

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[304]Rogers, *Practicing Compassion*, 57.
[305] Newberg and Waldman, *How God Changes,* 188.

of the brain and raising the activity in the areas that allow us to voluntarily control thoughts and feelings.[306] In a similar account, while treating a patient who had panic attacks when she would focus on her chest, Dr. Daniel Siegel instructed his patient to focus on her breath and to imagine a place where she felt safe and grounded. This allowed her to sit with and persevere through her discomfort and unrest.[307]

It is important to recognize that the mood congruency hypothesis and state dependent recall apply to positive emotional experiences as well. Therefore, when we create these shifts and when we use these practices to create a more grounded state, we are making it harder for the body to dwell on any negative or destructive triggers. We also have better access to positive emotional memories and we lay the groundwork for accessing similar memories in the future. We strengthen the neural networks that lead to these healthy response patterns, which creates more of the same and helps us achieve a more stable and less-reactive baseline to function from. In essence, we are using an upward spiral to develop a new way of being.

The Power of Pause begins to bring awareness to the way our body feels when we are in a reactive state. The Breath Practice brings awareness to a specific part of our body and invites us to acknowledge thoughts without passing judgment. The next practice, called Focusing, brings our bodily awareness and our nonjudgmental presence to the next level. The practice was developed on the premise that the body has an inherent knowledge, a physical experience, of one's situation and this awareness influences our lives and can help us reach our goals, called a "felt sense."[308] As

[306] Ibid.
[307] Siegel, *Mindsight,* 140.
[308] Ibid., 37.

discussed in the previous chapter, you begin by getting grounded. As you settle into the practice, notice what is surfacing in your mind. Acknowledge the thoughts that are surfacing but do not judge them—simply notice their presence. See which one elicits the strongest bodily reaction. Your attention is needed there. Focus on the issue that has emerged and try to come up with a fitting word or image that encompasses the feeling of the issue. While sensing this, ask what it is about this problem or issue that that embodies this word or picture that you have come up with. Dig deeper and ask what is in that sense. Receive what your body is telling you and continue to ask questions until you feel a bodily shift. It will feel like the relief you experience after remembering something you have forgotten that has been nagging you all day. Receive this shift in a friendly way.[309]

The practices that precede this have taught us to pay attention to our bodily responses to different triggers but up to this point we simply notice how our body reacts and then we actively engage in a practice that aims to change our state of mind. What I enjoy about this practice is that it teaches us that our body is much more than an alarm system signaling that something is wrong, rather it has something to reveal to us. This practice teaches us to integrate mind-body awareness. Because an animal caretaker's job to heal, care for and advocate for the voiceless, it is crucial that the caretakers allow themselves to be in tune with animals. In my experience, that requires us to dig deeper when there is no reasonable explanation why we feel a certain way, but we just *feel* that something is off about a situation.

[309] Ibid., 50-1.

Veterinarians are taught to look at symptoms, take diagnostics, and make a diagnosis, but what about the cases that defy explanation? I personally had a *very* sick dog that was having very severe symptoms. She was taken to a specialty center where an orthopedic surgeon, an internist, and a neurologist worked together to figure out what was wrong. All along, I had *felt* that a medicine she was prescribed was responsible for her decline. Time and time again several veterinarians told me that the medicine could not produce that reaction. Her neurologist listened to what I was saying, and although it made no sense, he trusted me and tested for that. Low and behold, she was having a toxic reaction to her medication—a reaction that had never been reported before. Veterinary medicine alone would not have caught that. I am hoping that this practice will teach veterinarians that listening to their body is just as important as using logic and statistics. Similarly, rescuers will need to listen to their bodies when they feel something is off (or really on) when reviewing foster and adoption applications and performing visits at the homes of potential fosters and adopters. Shelter workers may save lives if they notice subtle differences in behavior in the pets under their care. This could be as simple as a "gut feeling" that tells the worker to go back and double check a kennel. When working with those that cannot speak, I find the mind-body connection must be above average to be a great caretaker.

When we are unaware of the state of our mind and body we leave ourselves vulnerable to the effects of compassion fatigue and vicarious traumatization, so cultivating bodily awareness is absolutely critical to mediate the risks of these conditions.[310] Focusing teaches us to tune into our body's signals and witness our

[310] Rothschild and Rand, *Help for the Helper,* 103-4.

physical reactions without actually engaging in the reaction and perpetuating the cycle by giving it subjective meaning.[311] Witnessing these responses without evaluating or appraising the thoughts and feelings that arise mediates the tendencies of both sides of the brain. This promotes brain integration and helps us have a more balanced view of the world. It also helps grow new fibers between the hemispheres of the brain, known as across hemispheric advantage, which is believed to integrate thoughts and feelings in a more meaningful way.[312]

The last two practices that I introduced aimed at bringing about deeper healing. The first practice was based upon Internal Family Systems Therapy (IFS). To quickly review, IFS therapy is based on the understanding that we are comprised of internal "parts," sometimes called subpersonalities, each of which has their own feelings, beliefs, motivations, and memories.[313] Underlying these different parts is the Self, which is wise, deep and open.[314] Since these parts are like having little people inside of us, people can communicate with them and help them communicate with one another.[315] IFS is based on the premise that we are innately equipped to solve our own problems and heal from traumas we have experienced, but our inner lives are often unbalanced and prevent us from accessing the resources necessary to accomplish this.[316] Applying the idea in Family Systems Therapy that people are competent but are constrained by their family structure so that structure must be changed, Schwartz believes the same theory applies to

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[311] Daugherty, *Power Within,* 97.
[312] Daugherty, *Mindfulness to Heartfulness,* 102.
[313] Earley, *Self-Therapy,* 5, 17.
[314] Ibid., 7.
[315] Ibid., 17.
[316] Schwartz, *Internal Family Systems*, chap. 1.

our internal family structure.[317] For the contemplative practice, I guided people to engage with their parts and discover and heal old wounds that underlie the pain we feel working with animals.

I have to admit that the first time I engaged in this practice I thought it was a bit too new age and a little on the crazy side for me. Because I was captive in a class, I figured I had nothing better to do than to give it a try (fully expecting to scoff at the practice afterward). To my utter surprise, I felt great after and I knew something important was happening below the surface. After practicing a couple more times I had a major breakthrough and this became my favorite practice. Now that I know the neurobiology behind it, I feel much less crazy. It actually taps into some amazing self-healing properties.

It is possible that one of the reasons this practice feels so invigorating after a session is because of how many different parts of the brain it activates. When we visualize what our parts look like we set in motion all the guided imagery processes mentioned above when I discuss Remembering Sacred Moments. When our parts engage in dialogue with each other (the part I thought was most crazy) we are actively mediating the effects of PTSD. Research has shown that activation of the Broca's area, the language center of the brain, appears to be an integral part of most interventions with patients suffering from PTSD and other anxiety disorders.[318] As a matter of fact, while working with a client who was actively suffering from a flashback, Dr. Cozolino got very close to her and repeatedly told her that what she was experiencing was a memory from her past and that she survived it. When the client came out of the flashback she reported

[317] Ibid, Introduction.
[318] Cozolino, *Neuroscience of Psychotherapy*, 354.

hearing him and that it helped to bring her out of the flashback.[319] Cozolino theorized that the simultaneous activation of the Broca's area in the left hemisphere with the limbic structures in the right hemisphere of the brain may have been the key. He believed that being simultaneously aware of both inner and outer worlds may have lead to higher levels of cortical functioning and increased network integration.[320]

Perhaps, the most healing aspect of this practice is the ability to restructure our memory. Because memory is modified each time it is remembered, we have the ability to replace the pain we carry from hurtful childhood memories with more life-generating emotional experiences.[321] Dr. Cozolino proved this with an elderly client who had painful memories of loneliness stemming from being hidden in a storage room by himself during childhood to save him from the Nazis. He most spent his days riding his tricycle around in small circles. Dr. Cozalino had his client imagine he was invisible and could ride his tricycle trough those four walls and take the tricycle wherever he wanted to go for an adventure. He made his client pretend he was making up stories about where he went and what he did for his grandchildren. Eventually the pain from his childhood subsided and was replaced with feelings of safety and joy.[322] As Cozolino explains, "An important part of restructuring memory is something Freud called *Nachtraglichkeit*, which means the ability to reconceptualize a memory based on evolving maturity. This process requires being able to hold the memory in mind without being emotionally overwhelmed and simultaneously bringing it into the present, picturing it as it would look

[319] Ibid., 278.
[320] Ibid.
[321] Ibid., 91.
[322] Ibid.

from the perspective of who we are and what we know today."[323] As mentioned earlier, when we intentionally replace painful feelings with more restorative feelings, we are retraining our reactive patterns so that our conditioned response is from a more grounded space.[324]

This practice was taught toward the end of the class for several reasons. First, we need to be willing to be emotionally open and vulnerable to get the most out of the IFS Practice. The four practices that were taught before this allowed the practitioner to get accustomed to the idea and feel of contemplative practices, which may have been a little uncomfortable at first. They also served as building blocks to understand more about how the body and mind interact when focusing on certain aspects of our body or our psyche. Lastly, this practice is capable of healing deeply buried wounds. It was important that the practitioners had developed a high level of trust amongst each other because several people are likely to have emotional reactions to this practice. Furthermore, this practice can delve into the deeper traumas of this particular work, such as performing euthanasia, working with healthy animals that are euthanized simply because they are unwanted, abuse and neglect, irresponsible ownership, and even the loss of one's own personal pets. In my opinion, this is a practice that should be utilized often by this population because of the unavoidable trauma that unfortunately comes along with this line of work. It is not healthy to ignore or bury that pain and this practice teaches us how to heal deep wounds, often that go back to our childhood, without being overcome by our pain.

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[323] Ibid.
[324] Daugherty, *Power Within,* 97-8.

The last practice we engaged in was the Compassion Practice. It is was being developed at the same time Dr. Schwartz was developing IFS and the two practices are similar in many respects, but the Compassion practice also extends our compassion to others. Again, Dr. Frank Rogers developed this practice specifically to help people cultivate an attitude of compassion in relationship with others and toward his or her enemies, or at least those that the practitioner finds it difficult to feel compassion for. The Compassion Practice is unique in that it recognizes that before we can foster a compassionate attitude for another whom we have a difficult time feeling any compassion for, we must first attend to our own healing and spiritual practices.[325] In other words, we often fail to see others on their own terms, but rather, we see them through our filtered lenses, which are colored by our own needs, desires, sensitivities, and agendas.[326]

The Compassion Practice is comprised of four steps. We must first catch our breath, which essentially means we need to gain a little distance from whatever is going on in our lives and get grounded.[327] Then, we need to take our PULSE. PULSE is an acronym, which will be discussed in detail in the next paragraph, but what we need to do in this step is cultivate compassion for ourselves by taking a "U-turn" and "connect empathically with the cry of the soul hidden within his or her emotions and behaviors."[328] Next, we take the other's PULSE by repeating this step but focusing our compassion on the person we are having a difficult time with.[329] Lastly, now that we are in a grounded

[325] Rogers, *Practicing Compassion*, 23.
[326] Ibid.
[327] Ibid., 19.
[328] Ibid.
[329] Ibid.

place we need to decide what to do—what is the best course of action to heal suffering and promote the flourishing of all parties involved?[330]

For Rogers, every experience of compassion must include six steps, which he refers to as PULSE. PULSE is an acronym for: Paying attention, Understanding empathically, Loving with connection, Sensing the sacredness, Embodying new life, and Act.[331] Paying attention refers to perceiving others with a "nonjudgmental, nonreactive clarity.[332] This is what was mentioned above—seeing people on their terms, not through the cloud of your preconceived notions. When we are agitated by another's behavior, it can sometimes be difficult to connect with them, but we will soften if we can take a step back and realize that he or she may be acting that way because of a deep wound that he or she is trying to protect because he or she does not want to suffer through a trauma again. That is what Rogers means when he writes about understanding empathically.[333] One loves with connection when this love is nonjudgmental, loving, and all-embracing.[334] Sensing the sacred means tapping into the sacred space that has the capacity to hold and heal all wounds.[335] We embody new life when we are truly compassionate because compassion desires restorative healing for not only oneself but for others.[336] The final step in Roger's PULSE is to Act, to act in a nurturing way that fosters healing, kindness and care.[337]

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[330] Ibid.
[331] Ibid., 23-6.
[332] Ibid., 27.
[333] Ibid., 24.
[334] Ibid.
[335] Ibid., 27
[336] Ibid.
[337] Ibid.

The Compassion Practice is similar to the IFS Practice but it intentionally takes the practice a step further to extend compassion to another, and not just any other, but a person that brings up strong negative feelings. Depending upon how the practice is lead, one may reap the benefits of guided imagery, or if using internal dialogue, the practitioner will experience the effects of utilizing the Broca's area. Cultivating an attitude of forgiveness affects the peripheral and central nervous systems, resulting in physical and emotional health.[338] As a matter of fact, research has shown that victims of violent crimes and war who forgive their perpetrators have decreased levels of anxiety and depression, whereas those who did not were more prone to psychiatric disease.[339] I am speculating a little here, but I would imagine that shifting our focus from resentment to compassion for those that have hurt us, presumably results in increased oxytocin, in similar ways to the way Remembering Sacred Moments does. In addition to all the healing effects I have already discussed that can be attributed to oxytocin, there is another that I find fitting here. Studies have shown that rats that were in the same cage as rats that were injected with oxytocin, but that were not injected themselves, demonstrated calming effects.[340] In my opinion, this aspect of forgiveness holds great promise within the animal welfare community, particularly when practiced as a group.

This was the last practice taught to the class because it was an easy progression from the IFS Practice. The PULSE part of the practice is very similar to IFS, so the class was as well prepared for this practice as could be expected within the time constraints. It is much more difficult to extend feelings of compassion to our adversaries than to

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[338] Newberg and Waldman, *How God Changes,* 207.
[339] Ibid.
[340] Daugherty, *Power Within,* 117.

ourselves, but it is necessary for our longevity in this line of work. There are so many reasons to feel disdain for people who hurt animals, abandon animals when animals need them the most, or those that fail to treat animals for reasons that we may feel are inadequate. This pain will only destroy us and make our work harder and harder to do. It can fester and lead us to believe most people are inherently bad. Perhaps most importantly, we will not be able to create change if we pathologize those that we disagree with or do not understand. A perfect example of this is the Shelter Intervention Program (SIP) in Los Angeles.

After working with the homeless and low income residents living in Los Angeles, founder Lori Weise, of Downtown Dog Rescue realized that the pet overpopulation problem in shelters (and the resulting euthanasia problem) is as much a poverty problem as it is a pet problem.[341] The SIP is located at the South Los Angeles City Shelter and "each client who expresses interest in keeping his or her pet fills out an intake form and speaks with an Intervention Counselor. Counselors are trained to listen without judgment, trace the root cases of the problems being presented, and offer holistic solutions."[342] In 2015 alone, the SIP prevented 1,272 pets from entering the shelter.[343] Imagine the work that could be done if all animal welfare workers were able to offer compassionate action to those who, at a first glance, may seem to be uncaring or irresponsible pet owners.

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[341] "Shelter Intervention Program (SIP)," Downtown Dog Rescue, accessed March 30, 2016, https://web.archive.org/web/20170114212309/http://downtowndogrescue.org/programs/shelter-intervention-program/.

[342] Ibid.

[343] "End of the Year Numbers—A Graphic," Downtown Dog Rescue, accessed March 30, 2016, https://web.archive.org/web/20170114212040/http://downtowndogrescue.org/end-of-the-year-numbers-a-graphic/.

CONCLUSION

In summary, by the nature of their work, animal welfare workers are a population at high risk of developing compassion fatigue. I argue that contemplative practices, specifically chosen based on neuroscientific research, will prove to be an effective treatment for this condition. While there is very little neurophysiological research explicitly addressing compassion fatigue, there is ample research investigating the neurophysiology of PTSD, a very closely related disorder. The Power of Pause, the Breath Practice, and Remembering Sacred Moments will be used to stop current reactive patterns and will lay the groundwork for rewiring neural networks to a more life-generating reactive pattern, particularly using guided imagery. The Breath Practice and Focusing will be used to raise our emotional and bodily awareness so we can better understand our stress responses and they both have calming effects used on their own. Focusing will train us to identify felt senses and acknowledge that our bodies also hold an inherent knowledge that differs from the knowledge we seek in our minds. This will allow us to recognize reactive patterns without allowing them to overwhelm us. Finally, an Internal Family Systems Practice and the Compassion Practice will be used to heal our deeply wounded areas. Both practices are tools to restructure memory and both are capable of tending to very painful emotions without being lost in reactive patterns. Based on this research, I maintain that these practices together can be used to effectively treat and heal compassion fatigue and increase the animal caretakers longevity in their fields.

CHAPTER 4

THE STUDY

The primary purpose of this research was to examine the efficacy of specific contemplative practices as a means to prevent or diminish compassion fatigue on animal caretakers. The secondary purpose of this study was to gain experience conducting a study collecting and analyzing biological data. While Dr. Daugherty has been involved in several studies pertaining to neurophysiology, this was my first time conducting a study of any kind. Although this was not the first neuroscience study Dr. Daugherty has been involved in, it was the first study conducted in her laboratory at Cal Poly Pomona and it was also the first time either of us used the Biopac MP150 machinery. For these reasons, amongst others, this study was designed as a pilot study to gain preliminary data about animal caretakers' physiological response to stress. All testing was conducted at Cal Poly Pomona and all contemplative practices were associated with the Claremont School of Theology (CST), as this was a collaborative study between Dr. Alane Daugherty of Cal Poly Pomona and myself.

For the purposes of this study compassion fatigue will be defined as "physical and spiritual exhaustion, accompanied by acute emotional pain, that stems from a caregiving position," which again was borrowed from Kathleen Ayl.[344] Contemplative practices will be defined as a transformative connection with the calm, non-judgmental, curious, and compassionate core at the center of our inner self. Research has shown that compassion

[344] Ayl, *When Helping Hurts*, chap. 1.

fatigue, as described here, exhibits many characteristics associated with stress.[345] The contemplative practices used in this study involved breathing and refocusing emotional attention, which has been shown in research to exhibit a reduction in physiological and psychological stress.[346] Although contemplative practice has been a viable approach to reduce emotional stress in various situations, there appears to be no published research looking at the effect of specific contemplative practices within the animal caretaker population.[347] We hope to gather enough data through this pilot study to warrant a larger study on this topic. We also hope to better understand viable techniques and practices to reduce compassion fatigue among animal caretakers.

METHODS

PARTICIPANTS

Participants were recruited from animal shelters, veterinary offices, and animal rescues in the Orange County, California area and included shelter volunteers, shelter networkers (these people attempt to connect shelter animals at risk of euthanasia with animal rescues), veterinary staff, veterinary technicians, veterinarians, animal rescue volunteers and animal rescue board members. Compensation was not offered in this case so participation was purely voluntary. Local animal shelters did not approve recruitment

[345] C. M. Sarabia-Cobo, "Heart Coherence: A New Tool in the Management of Stress on Professionals and Family Caregivers of Patients with Dementia," *Applied Psychophysiology Biofeedback* 40, no. 2 (June 2015), accessed February 12, 2016, http://dx.doi.org/10.1007/s10484-015-9276-y.

[346] Rollin McCraty and Maria Zayas, "Cardiac Coherence, Self-Regulation, Autonomic Stability, and Psychosocial Wellbeing," *Frontiers in Psychology* 5, (September 2014), accessed May 1, 2016, http://dx.doi.org/10.3389/fpsyg.2014.01090.

[347] Marina Khusid, "Self-Care Mindfulness Approaches for Refractory Posttraumatic Stress Disorder," *Psychiatric Annals* 43, no. 7 (July 2013): 340-343.

of staff but shelter volunteers were still recruited. Eight participants were initially brought in for testing but three were eliminated by the conclusion of the study because they were unable to attend the minimum amount of sessions required to complete the study.

After analyzing the questionnaires provided by each participant during the pre test, the data showed that the final five participants included one shelter networker, one animal rescuer, two shelter volunteers and a staff member at a local veterinary office (see Appendix C for questionnaire). Three of the participants reported spending over 30 hours a week in a caretaking role, one spent between 11 and 15 hours a week, and one spent five or less hours a week in a caretaking role. One participant had been an animal caretaker for more than 15 years, two had been in that role for five to six years, one for three to four years, and the last had been a caretaker for one to two years. Three participants reported that all of their time as a caretaker was spent directly interacting with animals, while two reported that almost all of their time as a caretaker was spent having direct contact with animals. All participants were women.

PROCEDURE

The pilot study began with researchers giving verbal instructions describing study protocol, and participants signing an informed consent, which included a written description of the study (see Appendix B). Subjects were checked for comprehension by the researchers. Immediately following, the participants took the Professional Quality of Life (ProQOL 5) survey (see Appendix E), which was used to measure: compassion satisfaction, burn out and secondary traumatic stress. Participants were then asked to fill

out a short informational sheet describing their role and duties as an animal caretaker (see Appendix C).

After filling out the informational sheet subjects were then tested for physiological baseline measurements including: electrodermal activity (EDA), respiratory sinus arrhythmia (RSA), 3 lead electroencephalogram (EEG), salivary cortisol, and facial electromyogram (EMG). These measurements will be described in more detail later, but just briefly, EDA measures the electrical response in our skin caused by stress, simply put, the RSA measures the relationship between heart rate and respiration, EEG measures brain activity—here we were looking for a subconscious emotional response as well as a conscious judgmental response, and finally, the EMG measures muscle activity—we measured the brow muscles (frown) and cheek muscles (smile). Next, subjects watched an approximately two-minute slide show featuring pictures of animals in carrying states of distress, while being monitored for: EDA, RSA, EEG, and EMG. The slideshow consisted of twenty slides depicting animals in varying states of distress (see Appendix F). The slides were shown for four seconds and each slide was separated by two seconds of a black screen so that the participant's reaction to each specific slide could be analyzed. We also conducted a salivary cortisol test at the conclusion of the slideshow. These procedures were used to test stress reactions and the participants' capacity for self-calming. This was followed by a debriefing session to ensure the subjects' feelings and concerns were addressed to see if she was affected by watching the slideshow.

For the next six weeks the participants met at an executive office once a week for anywhere between thirty minutes and one and a half hours each week where they were be taught the following contemplative practices: Remembering Sacred Moments, The Power

of Pause, The Breath Practice, Attitudinal Breathing, Focusing, an Internal Family Systems Practice, and finally, the Compassion Practice. The order in which the practices were taught was designed to first learn how to become aware of one's body, mind, and influences of the outside world. Practices were designed to build on the awareness learned in the previous week and to take it to the next level in order to engage in the practice at hand. The practices were also designed to develop trust within the group as time went on. The later practices required a great amount of self-awareness and trust in the group and the practice leader that a safe space was created and held.

These practices are primarily based on breath control and refocusing emotional attention, however each differs in how emotional attention is focused. Each participant was allowed to miss one class session. If the participant missed a session, an audio recording was provided to her before the next meeting so she would be able to still partake in the practice on her own. Before each practice I also explained the physiological benefits of each practice and instructed participants when each practice might be appropriate to use during their caretaking of animals. Participants were asked to engage in these practices at least three times a week on their own when they were outside of the classroom. At the end of each session participants were allowed to ask questions about any of the practices they had learned.

The study was designed so that the week after the sixth session, the researchers and the participants would meet again to conduct an exit interview/post test, where testing protocol would follow pretest procedures (baseline physiological measurements, measurements during the slideshow, ProQOL 5 survey and posttest salivary cortisol). The only differences at the exit interview/post test were that subjects were instructed to

engage in self-calming techniques while watching the slideshow and that the information questionnaire was changed and included questions about the participants' engagement with the practices outside of the classroom meeting as well as their feedback about the practices (see Appendix D). Unfortunately, due to the unforeseen passing of one of the researcher's pets, the exit interview/post test was postponed by one week. The post test data was gathered to compare to the baseline data collected at the pre-test to see if there were any changes in the stress levels of the participants after learning the contemplative practices.

HYPOTHESIS

Our initial hypothesis was that the participants would show decreased stress responses in the exit interview as a result of engaging in the contemplative practices for six weeks. More specifically, we anticipated seeing lower burn out and secondary traumatic stress scores on the ProQOL 5 in the post test and no change or possibly even higher compassion satisfaction scores. In terms of physiological data at the post test as compared to the pre test, we anticipated seeing a smaller amplitude in the EDA, for the EMG measurements we expected the post test to reflect a lower average peak frequency for the corrugator (brow) muscles and a neutral or higher average peak frequency of the zygomatic (cheek/smile) muscles, a lower RSA score, a higher heart coherence score, and less of a change in cortisol levels before and after the slideshow. However, comments made by one of the participants during one of the classroom sessions made us rethink our hypothesis when we were about midway through the study. The participant mentioned that she noticed that she was crying more often now than she had previously. This

caused the researchers to realize the initial hypothesis may have been oversimplified. Our new hypothesis at this point would have been that the results would depend on the participant's initial coping style, in so far as, the participants that coped with stress by burying feelings, pushing them aside, or ignoring them completely will likely show an increased stress response at the post test because the contemplative practices will increase the participant's awareness of her feelings. We hypothesized that those participants who were more expressive with their emotions would show decreased stress responses at the post test because they are learning to feel emotions without becoming enmeshed in them. Unfortunately, information about the participants' coping style was not collected at the pre test so there would be no way to prove or disprove a new hypothesis.

DATA ANALYSIS

The ProQOL 5 survey was used to determine the participant's levels of compassion satisfaction, burn out, and secondary traumatic stress. It takes into account the work environment, the professional caregiver's personal characteristics, and the individual's exposure to primary and secondary trauma in the work setting.[348] This measurement was chosen because it has good construct validity with over 200 published papers (at the time the manual was published) and of the 100 published research papers on compassion fatigue, secondary traumatic stress and vicarious traumatization, nearly half used the ProQOL or one of its predecessors.[349] It is the most commonly used measure of the positive and negative effects of working with people who have

[348] Beth Hudnall Stamm, *The Concise ProQOL Manual,* 2nd ed. (Pocatello, ID: 2010), 10, accessed May 25, 2016. https://web.archive.org/web/20170301043235/http://www.proqol.org/ProQOl_Test_Manuals.html.

[349] Ibid., 13.

experienced extremely stressful events.[350] Furthermore, it was used in several of the articles reviewed in Chapter 1 so it was used to keep the data from this study consistent with the research reviewed.

The questionnaires were analyzed by following the scoring instructions provided in the ProQOL 5 manual. According to the instructions, some scores were to be reversed, most stayed the same and then the scores for each question were tallied and converted into raw scores.[351] Higher scores in compassion satisfaction signify a greater satisfaction in the ability to be an effective caregiver, while higher scores in burn out and secondary traumatic stress suggest that the participant is at higher risk for burn out and/or secondary traumatic stress. Dr. Stamm, the creator of the ProQOL 5, considers burn out and secondary traumatic stress to be components of compassion fatigue; so higher scores in those areas may represent a higher susceptibility to compassion fatigue.[352] However, it is important to state that the ProQOL 5 is not a diagnostic test and should not be used as such. It can be used to bring awareness to some aspects of a caregiver's role that may make him or her more susceptible to depression as well as the conditions discussed above.[353] It should also be noted that the raw scores are best understood in continuous form,[354] meaning the scale ranges from one to 100 and the larger the number the stronger the score. For reference, a cut score broken into 25th and 75th percentiles will also be given in the results section of this chapter.

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[350] Ibid., 12.
[351] Ibid., 15.
[352] Ibid., 17.
[353] Ibid., 18.
[354] Ibid.,

All physiological data was recorded and analyzed using AcqKnowledge 4.4 software. Due to the time constraints imposed to complete my dissertation on time, the decision was made to analyze the data for each measurement using the averages of the overall two-minute slideshow, breaking it down to six-second epochs where applicable. The slide data was broken down into six-second epochs to account for the four-second slide depicting a picture and the two-second blank screen before the next image was shown. The average of each participant's pre test data was compared to the average of their post test data.

The EDA data was calculated using the Event-related EDA Analysis and then looking at the average amplitude over the two-minute period to determine the strength of the EDA response. Both EMG readings were calculated using the EMG Frequency and Power Analysis provided in AcqKnowledge. The average peak frequency was then used to determine the strength of the participant's facial response. The RSA was calculated using the RSA Time Series analysis and the average RSA was compared in the pre and post test. The heart rate variability (HRV) measures were calculated using the Single Epoch Heart Rate Variability (HRV) – Spectral. The heart coherence, which can be described as "a relatively harmonic signal (sine wave-like) with a very narrow, high-amplitude peak in the [low frequency (LF) band] region of the HRV power spectrum and no major peaks in the [very low frequency (VLF)] or [high frequency (HF) bands]."[355] Thus the calculation used to derive the heart coherence was LF/(VLF + HF).[356] A larger number signifies greater heart coherence. Unfortunately, while analyzing the data, it was

[355] Rollin McCraty, et. al., *The Coherent Heart: Heart-Brain Interactions, Psychophysiological Coherence, and the Emergence of System-Wide Order* (Boulder Creek, CA: Institute of HeartMath, 2005), 14.

[356] Ibid.

determined that the EEG readings appeared to reveal interference between the two leads, therefore the EEG readings were not considered for analysis.

The cortisol analysis was a very involved technical process. The saliva samples were stored in a freezer in the Biochemistry Lab at Cal Poly Pomona at -80°C until analysis. The samples were thawed and then mixed for two minutes at the highest speed using a vortex mixer. A diluted conjugate solution was prepared using 10 μL of Conjugate (reagent 3) to 1 mL of incubation buffer (reagent 2), which were included in the Eagle Biosciences Cortisol Saliva ELISA Assay Kit. The mixture then sat at room temperature for three hours. While that mixture was sitting, a wash solution was prepared using one part dilution ratio of 10X Conc. Wash Solution to 10 parts distilled water. Once the diluted conjugate solution was ready, the calibrators C_0 through C_6 included in the ELISA Assay Kit were gently shaken for five minutes using an orbital shaker. The calibrator solutions were then pipetted into two wells within the microplate provided per calibrator solution. Two wells were left with no solution to account for the Blanks. Each participant's pretest sample prior to watching the slideshow was pipetted into two of the 96 wells in the microplate that was provided, then their pretest sample after watching the slideshow was pipetted in two wells, next their post test sample prior to watching the slideshow was pipetted into two wells, and finally their post test sample after watching the slideshow was pipetted into two wells. Next, 200 μL of the diluted conjugate solution was added to each well with the exception of the two Blanks. At this point the diluted conjugate solution ran out before all wells were filled so another batch was made keeping to the same ratios. In order to speed up the process, the solution was shaken using an orbital shaker for about five minutes. It sat for a couple minutes and was

then added to the rest of the wells. One all wells were filled with the diluted conjugate, the microplate was incubated at 37°C for one hour. The contents of the wells were then dumped out and the wells were washed three times each with 300 µL of wash solution. All excess wash solution was emptied out of the wells by tapping the inverted plate on a paper towel. Next, 100 µL of TMB Substrate (provided in the kit) was added to the wells. The microplate was then incubated at room temperature in the dark for 15 minutes. Once removed, 100 µL of the Stop Solution (provided in the kit) was added to the wells. The microplate was then placed in the microplate reader for analysis.

RESULTS

Again, each participant received a score in each of the following areas: compassion satisfaction, burn out, and secondary traumatic stress. We compared each participant's pre test score with their post test score (see Appendix G for more detail). Participant 1's pre test scores reflect a compassion satisfaction score of 36, a burn out score of 32 and a secondary traumatic stress score of 29. In her post test, Participant 1 showed a compassion satisfaction score of 34, a burn out score of 31 and a secondary traumatic stress score of 31. In the pre test, Participant 3 showed a compassion satisfaction score of 41, a burn out score of 22, and a secondary traumatic stress score of 29. In her post test, her scores reflected a 43, 23, and 25 respectively. Participant 4 showed a compassion satisfaction score of 45, a burn out score of 18, and a secondary traumatic stress score of 18 in the pre test and a 40, 16, and 17 respectively in the post test. Participant 5 scored a 37 in compassion satisfaction, 32 in burn out, and a 25 in secondary traumatic stress in the pre test. She scored a 37, 29, and 31 respectively in the

post test. Finally, Participant 7 showed a 27 in compassion satisfaction, a 22 in burn out, and a 27 in secondary traumatic stress in the pre test. In the post test her scores reflected a 27, 22, and 26 respectively.

To summarize, two participants showed a decrease in their compassion satisfaction score—one was slight and one was a bit more significant, one showed a slight increase, and two showed no change at all. Our hypothesis was supported in three of the participants' results, and was not supported with two of their results. I must admit I was surprised by the five point decrease for one of the participants. Three participants showed a slight decrease in their burn out score, one showed a slight increase, and one showed no change. Our hypothesis was mostly supported with the results of this measurement since three of the participants showed a decrease. Three participants showed a decrease in secondary traumatic stress, with one showing a fairly large decrease. The two remaining participants showed an increase, one of which was a six point swing, which ended up being the largest change for any of the participants among all of the categories. Once more, the trend here supports our hypothesis. In terms of cut scores, one participant moved from average to high and one moved from low to average (though her original score was on the borderline of low and average to begin with) and one participant's burn out score moved from low to average (see Appendix G for detail). Again, the participant was on the verge (one point away) of being average in her pre test.

The participants' electrodermal activity was measured by placing electrodes on two of the participants' fingers. EDA is a measure of skin conductance. Skin conductance is "a sympathetically mediated function that has been widely used as an index of emotional arousal, and that has also become an important tool in the study of

unconscious or implicit cognition."[357] The response is involuntary and is not necessarily felt by the participant. Skin conductance is positively correlated with emotional arousal,[358] so when a participant is aroused, whether the stimulus is positive or negative, the EDA measurement will show a stronger response. In this case we analyzed the average amplitude, so we would expect to see a lower average amplitude when the participant is in a calmer or less reactive state.

Participant 1 showed a pre test score of .24 and a post test score of .07. Participant 3 reflected a .06 in the pre test and a .16 in the post test (see Appendix H for more detail). Participant 4 showed a .01 in the pre test and a .11 in the post test. Participant 5 reflected a .20 in the pre test and a .01 in the post test. Finally, Participant 7 showed a .05 in the pre test and a .03 in the post test. Therefore, the results showed that three of the five participants showed a lower average amplitude in the post test than they did in the pre test, which is in alignment with our hypothesis for this measure.

We used the electromyogram to assess the participants' facial reactivity to the slides. Two different EMG measurements were taken, one of the corrugator muscle and one of the zygomatic muscle. The corrugator muscles raise and lower the eyebrows and are considered to be indicative of an unpleasant reaction.[359] The zygomatic muscles are responsible for the smile response and are accepted as a measurement of a pleasant response.[360] Dr. Daugherty and I compared the participants' average peak frequency of the EMG measurements in the post test to the average peak frequency of the EMG

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[357] Geoffrey Ahern, Lynn Nadel, and Richard D. Lane, *Cognitive Neuroscience of Emotion* (New York: Oxford University Press, 2000), 4, accessed January 11, 2017, EBSCO eBook Collection.

[358] Ibid., 258.

[359] Ibid., 255-6.

[360] Ibid., 256.

measurements in the pre test. We expected the post test to reflect a lower average peak frequency for the corrugator muscles and a neutral or higher average peak frequency of the zygomatic muscles.

The results for the corrugator muscle showed that Participant 1 had a pre test average peak frequency of 45.62 and a post test of 14.20, Participant 3 showed 35.96 in the pre test and 66.50 in the post test, Participant 4 reflected a 20.81 in the pre test and a 69.30 in the post test, Participant 5 had a 23.29 in the pre test and a 60.03 in the post test, and finally, Participant 7 reflected a 44.51 in the pre test and a 60.03 in the post test (see Appendix H). The results for the zygomatic muscles were as follows: Participant 1 reflected a 44.98 in the pre test and a 39.39 in the post test, Participant 3 had a 16.52 in the pre test and a 76.37 in the post test, Participant 4 reflected a 46.75 in the pre test and a 60.03 in the post test, Participant 5 showed an 11.71 in the pre test and a 30.33 in the post test, and finally, Participant 7 reflected a 64.01 in the pre test and a 35.50 in the post test. Because participants 1 and 5 showed the exact same post test result for their corrugator muscles and Participant 4 also showed the same result on her post test zygomatic score, the participant's scores were scrutinized more closely. Upon reviewing both the graphs recorded at the time of testing and each individual's software analysis results per epoch, we concluded there was interference on each of these EMG results. Therefore, we will not include this data.

To summarize, two out of the five participants showed a higher average peak frequency for their corrugator muscles in the post test, which did not support our hypothesis on that measure; one showed a lower average peak frequency in the post test, which did support our hypothesis; and two participants showed interference and could not

be included in the final analysis. Two of the participants showed an increase in average peak frequency for their zygomatic muscles in the post test, which supported our hypothesis; while two showed a decrease, which did not support our hypothesis for that measurement; and one participant showed interference in the post test and therefore could not be included. Overall, the EMG results appear to be inconclusive.

When we breathe in, we temporarily suspend the parasympathetic influence on our heart rate, which results in an increased heart rate. When we breathe out, we reinstate the parasympathetic influence on our heart rate, which leads to a decrease in heart rate. This rhythmic link between our breath and our heart rate is known as our respiratory sinus arrhythmia.[361] In other words, our RSA is an estimate of our parasympathetically mediated heart rate variability.[362] Higher levels of resting HRV have been associated with greater self-reported emotion regulation.[363] Therefore, we expected to see that the participants' average RSA increase in the post test data.

In this study, Participant 1 showed a 95.11 in the pre test and a 71.19 in the post test, Participant 3 reflected a 30.67 in the pre test and a 46.53 in the post test, Participant 4 showed a 27.92 in the pre test and a 76.42 in the post test, Participant 5 reflected a 66.02 in the pre test but unfortunately, an initial exhale was not detected in the post test so no score was given, and finally, Participant 7 showed a pre test RSA of 20.5 and a post test of 39.95 (see Appendix H). So, we saw that three of the participants had an elevated average RSA in the post test as compared to their pre test, only one had a lower average

[361] Bradley M. Appelhans and Linda J. Luecken, "Heart Rate Variability as an Index of Regulated Emotional Responding," *Review of General Psychology* 10, no. 3 (September 2006): 229-40, accessed January 12, 2017, http://dx.doi.org/10.1037/1089-2680.10.3.229.

[362] Ibid., 231.

[363] Ibid., 235.

RSA in the post test, and one was not able to be included. Thus, the majority of the participants supported our hypothesis.

The HeartMath Institute describes heart coherence as

> a specific assessment of the heart's rhythms that appears as smooth, ordered and sine-wavelike patterns… when we are in a coherent state, virtually no energy is wasted because our systems are performing optimally and there is synchronization between heart rhythms, the respiratory system, blood-pressure rhythms, etc.[364]

In this study, heart coherence would be increased if we saw a larger number of heart coherence in the post test than we did in the pre test. Dr. Daugherty and I expected to see that heart coherence would increase after participating in the contemplative practices because we believed that lower levels of stress would result in higher heart coherence. Studies have shown that heart coherence is associated with high performance, stress reduction, greater emotional stability, and several different health benefits.[365]

The results showed that Participant 1 had a score (given in seconds squared) of 6.72 in the pre test and 3.29 in the post test, Participant 3 showed a 1.37 in the pre test and a 2.7 in the post test, Participant 4 reflected a 0.62 in the pre test and a 5.67 in the post test, Participant 5 a 1.42 in the pre test and a .86 in the post test, and finally, Participant 7 showed a .43 in the pre test and a .74 in the post test (see Appendix H). So, to summarize, four out of the five participants showed an increase in heart coherence in the post test. This supports our hypothesis for this measure.

Just to briefly revisit the analysis process, an ELISA Assay kit works by introducing a series of chemical processes to the saliva samples that will eventually

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[364] HeartMath Institute, "Research FAQs," HeartMath Institute, accessed January 6, 2017, https://web.archive.org/web/20170114204655/https://www.heartmath.org/support/faqs/research/.

[365] Sarabia-Cobo, "Heart Coherence."

present the cortisol samples as certain colors. A salivary ELISA Assay Kit will test for cortisol levels based on the color density of the samples. Higher levels of cortisol will present as a denser color, whereas lower levels will present as a paler color on the same spectrum. The microplate is then placed in a microplate reader, which will measure the light absorbency of the samples, which can then be used to analyze the cortisol levels. When we took the microplate out of the dark room incubator, we noticed the contents in the wells that had contained the calibrators did not look as they should have. The wells containing C_0 should have been pale in color gradually increasing in color up to C_6, which would be darker. This would provide the curve we would use to analyze the saliva samples from our participants. The lighter the color, the less cortisol present and the denser the color the higher the cortisol content present. Therefore calibrators C_0 through C_6 should increase from light to dark and less cortisol to more cortisol. Instead, the colors decreased in density from C_0 to C_6. At this point we were advised that the data was most likely compromised but we could continue and place it in the microplate reader to confirm. However, the motor on the microplate reader was suddenly inoperable. Fortunately a spare was available. The data was saved but could not be printed or synced with the lab computer because we were unfamiliar with the software on the spare. Nevertheless, the results did confirm that the data was most likely compromised. Therefore, unfortunately, we are unable to use the cortisol results in this study.

As previously mentioned, the participants were allowed to miss one class session, which was later provided to her as an audio recording. Participants 3 and 5 had perfect attendance. Participants 1 and 4 missed the third session, which covered the Attitudinal Breathing practice. Participant 7 missed the fifth session, which covered the Internal

Family Systems practice. It may also be interesting to note the results of the post test questionnaire (see Appendix I). The questionnaire revealed that Participant 1 engaged in practices four times a week and practiced Remembering Sacred Moments and the Power of Pause most often. Participant 3 practiced three times a week, while Participant 4 practiced two times a week, but both most frequently engaged in Remembering Sacred Moments and the Breath Practice. Participant 5 practiced four times a week and most often used the Power of Pause practice. Finally, Participant 7 practiced three times a week and most frequently engaged in the Breath Practice

POST TEST NOTES

It is worth noting that one of the participants reported in the post test questionnaire that her situation at home, but pertaining to this work, had changed and had become more stressful. Without going into too much detail, her work with animals was literally brought to her home. This created a situation that disturbed the daily routine and dynamic among her family and her animals. It also created a situation where she was in a very stressful animal caretaking role every hour of the day without any escape (see Appendix D). What I found interesting about this is that the participant showed an increase in secondary traumatic stress and a decrease in Compassion Satisfaction on the post test ProQOL 5. She showed some physiological results that did not support our hypothesis but no more than any of the other participants. She was, however, the only participant that had two out of the three ProQOL 5 results oppose our hypotheses. Since the ProQOL 5 relies on self-reporting, I cannot help but wonder if this new situation at home added to her felt stress. Two of the participants also mentioned that they felt a bit

stressed from their drive to the post test as they ran into traffic and it made them late. I wonder if that also played a role in the physiological testing.

DISCUSSION

The primary purpose of the study was to determine if these contemplative practices held any promise in treating compassion fatigue among animal welfare workers. The study showed promise in this respect. Although there were not enough participants to prove statistical significance the trends show that contemplative practices were helpful to most of the participants in the study. Most of the participants showed minor relief in terms of compassion fatigue on the ProQOL 5 after they had learned and engaged in the practices. The physiological data also showed slight alleviation of stress for most of the participants. Perhaps the most encouraging sign that these practices were helpful for the participants is that on the sixth and final class meeting the five women who completed the course requested that we continue our weekly meetings because they felt that it was helping them not only in their life with animals but also in other aspects of their lives. They even invited another animal caretaker to come join the weekly meetings because they felt she would benefit from them. As a matter of fact, the three participants who were unable to complete the class also expressed interest in future meetings. Several reported that they felt they were better able to handle stressful situations and react from a more grounded state.

I am encouraged by the results of this study and even more motivated to turn this into a larger study with enough participants to determine the results with statistical significance. I gathered informational data at the post test that would help me improve

the study design in the future. The relevant feedback and its implications will be discussed in detail a little later in the chapter.

LIMITATIONS

This pilot study had several limiting factors, which is what prevented it from becoming a full study. The most obvious limitation was the sample size. It was impossible to determine statistical significance with only five participants. The small sample size also precluded the possibility of incorporating a control group. Unfortunately, because the study was designed as part of my dissertation, which comes with several deadlines, time was another limiting factor. Ideally, I would have had more time to recruit participants and to work around the bureaucratic red tape prohibiting shelter staff from participating. Perhaps more importantly, I would have been able to analyze participants' responses to individual slides rather than taking an average of the entire slideshow. We also may have been able to prevent the interference on the EEG measure if we had more time.

FUTURE IMPLICATIONS

The second purpose of this study was to afford me the opportunity to gain more experience conducting a scientific study and to allow both Dr. Daugherty and myself to become familiar with using the Biopac MP150 machines so that a full study may eventually be carried out. The pilot study was invaluable in this respect. There are so many areas for improvement that would have been lost had this study not been conducted first. In addition to allotting more time to recruit participants and to analyze the data,

there are several logistical changes that I would make to improve a future study. More experience is also necessary to prevent or at least minimize the chances of eliminating data due to interference or improper analysis.

PROPOSED IMPROVEMENTS

The study's greatest value is that it exposed so many areas in which the study can be improved to create a more fruitful study in the future. One of the most important changes that needs to be made is to increase the participant pool—not only in terms of size but also in terms of diversity of the participants. It is my hope that county and city shelters will review this study and will feel comfortable enough with the confidentiality of the participants that they will allow access to shelter staff and shelter veterinarians. In my opinion, shelter vets have the most emotionally taxing jobs of all potential participants so I would be really interested to see if these practices can help them. I need more veterinarians and veterinary staff to participate so their data can be compared to the rescuers and shelter volunteers. It would be interesting to see if one's role could be tied to the success of the program. I would also like to expand recruitment to a broader geographical area so that the participants have different working and volunteering conditions.

Increasing the number of participants would also allow for a control group. The future study would need to include a control group that did not learn how to participate in the contemplative practices so we can eliminate other factors that may confound the data. Ideally, the control group would still meet weekly over the six weeks that the experimental group is learning the practices. This would eliminate the possibility that a

reduction in stress at the post test was due to something other than the contemplative practices, such as weekly debriefings with other animal caretakers or perhaps familiarity with the slideshow.

The most prevalent comment that participants made after viewing the slideshow was that the images were not as bad as the participants were expecting and that the images had no real affect on them. While the study was testing biofeedback and not necessarily conscious reactions, I do agree with the participants. The images featured in the slideshow should contain more graphic images. It is important to remember that the participants are regularly exposed to animals suffering from neglect, injuries, and medical conditions due to the very nature of the their work. Therefore, to truly induce stress I believe that the images need to be much more graphic. I anticipate this may cause problems getting the study approved by the IRB committee but I believe that the feedback I received in the pilot study should be taken into consideration. Finally, another potential benefit to changing the images is that perhaps more provoking images would allow us to see stronger reactions to particular slides, which would permit a more careful analysis of each slide rather than analyzing the slideshow as a whole.

Prior to beginning this study Dr. Daugherty and I conducted practice tests using the Biopac MP150 machinery since neither of us had any experience with it. Even after running practice tests, we found that throughout the study we were improving our techniques so that the readings were clearer. The more familiar we become with these machines, the more reliable our results will be. One of the areas that we improved the most in was gathering the EEG data. We noticed that the data became clearer and clearer as the study progressed. Because we recognized this, we did not feel comfortable

including the initial readings in the study, which means they could not be compared to the data collected in the post test. Additionally, we were not entirely certain that we were not getting interference between the two EEG probes and even some of the other bio data due to the sensitivity of the electrodes. This will need to be perfected before a full study is conducted. We would also need further wet lab experience in order to become more proficient in cortisol analysis. This pilot study was a great learning opportunity but certainly more neuroscience experience is necessary before launching a full study.

During the six week course we met at an executive office that was mostly unoccupied. However, a few times the cleaning company came in to clean the building, resulting in noises of vacuuming and doors closing that likely disturbed the participants while they engaged in their practices. The building was also on a very busy street so traffic could be heard at all times and that also denied the participants an entirely peaceful and relaxing experience. I was pleasantly surprised at the class' ability to tune most of the distractions out and remain engaged, but in the future I would make sure I had a quieter and more intimate room for the participants.

While analyzing the data I found myself wanting to know more specific information about the participants and their level of engagement with the practices. Next time, I would include questions about the age and sex of the participants. I would ask questions in the pre test gathering more about the participants coping style and how they manage their stress. I may ask questions to help understand how they express sadness, anger and frustration as well. In the pilot study I asked the participants how many times a week they engaged in any of the practices that learned in the class, which of the practices they liked practicing the most, and which practice they found to be the most helpful and

why. This information was insightful but I found myself wanting to know more specific information. In the future I would tell the participants in the first class that at the end of the study I will be asking them how many times a week they engaged in each specific contemplative practice. I would really like to see if there is any relationship between any of the factors mentioned above.

Another potential adjustment that I go back and forth about making is what practices should be included in the study. In the post test questionnaire, there were two practices that the participants engaged in most often—Remembering Sacred Moments and the Breath Prayer. The Power of Pause was a close third. I am not sure if these were engaged in more than the others because they were taught earlier in the course so the participants had more time to practice them or if it's because they are not as involved as Focusing, the IFS Practice and the Compassion Practice. Based on their responses, the participants tended to favor practices that could be done in the moment to de-escalate a reaction or change a state of mind and they enjoyed practices that could be done in most settings throughout the day.

I would also ask the participants to fill out a questionnaire to find out if they felt the study was effective. I would ask them if they felt less stressed in week six than they were in week one. I would ask which practice they use to calm them in the moment and which practices they use when they have alone time to create a calmer demeanor. I would ask for specific instances or circumstances in which they use the practices. I would also ask if any friends or people that they know well have made any comments about them being less stressed. One of the participants in my study mentioned that her husband liked when she returned from our classes because he noticed she was calmer. I

am just curious if the qualitative aspect of this study is in alignment with the quantitative data collected.

The final improvement that I would make to a future study is that I would use a different survey to assess compassion fatigue. None of the participants in the pilot study showed that they were at risk of experiencing compassion fatigue. While that may be true, some of the comments made in class by the participants led me to have some doubts and there is a very good reason why there may be a discrepancy. The ProQOL 5 was designed to assess human caretakers of other humans. For reasons discussed previously, there are some very distinct differences for those that care for animals and for those that care fore humans. As such, it would have been helpful to alter the ProQOL 5 to use language or perhaps to add different questions that are more specific to animal caretakers, touching on subjects such as abuse, neglect, abandonment, relinquishment to shelters, and perhaps most importantly, euthanasia. When I chose this measure to assess compassion fatigue it was with the intention of getting approval from the owner to make these changes. When I attempted to get permission I discovered that although changes were previous allowed with permission from the owner, he could no longer respond to individual requests due not only to the volume of requests but also because he was facing health issues.[366] Unfortunately I discovered this after I had received IRB approval from both schools and shortly before the study was set to begin. Therefore, it was not feasible for me to find another measure that I could alter by the time we needed to start our study.

[366] ProQOL, "Contact Us," Eastwoods, accessed May 25, 2016, https://web.archive.org/web/20170114205236/http://www.ProQOL.org/Contact_Us_2.html.

CONCLUSION

The desire to conduct a full study in the future is so compelling because the knowledge gained from a larger study could have such a positive impact for animal welfare workers. After making the improvements discussed above, the information garnered from the study could be used to tailor programs to meet the specific needs of animal shelters, veterinary offices, or animal rescuers. These programs could easily be implemented around the country to spiritually rejuvenate people drawn to this work. There are a variety of ways this could be done.

Shelters and veterinary offices could bring in consultants who could suggest minor improvements to aid their employees using the information from the study. For example, a quick and easy solution could be to keep one small room at their facility unoccupied employees and volunteers could use that room as a quiet sanctuary where he or she could go during the day to engage in a quick practice and then reemerge refreshed and in a more grounded state. The room might have soft lighting, calming aromas, and comfortable floor pillows or chairs to aid in the process.

Perhaps employees holding certain positions that are at greater risk of burn out or compassion fatigue would be sent to a three-day retreat. The retreat could be an intensive version of the six-week course. Two practices would be taught teach day and they would be taught in the same order as they were in the six-week course. Participants would engage in a practice, then break up into smaller groups to reflect on the practices and share their experiences. The groups would remain the same over the course of the three days so that trust could be built within the intimate groups. After that, the participants would journal about the practice or complete workbook style exercises about each

practice. After a break, the same routine would commence with the next practice. To save on costs, the six-week and three-day programs could be recorded and offered online at a reduced rate so that veterinary offices, shelters, and rescues across the country would have access to the material.

Alternatively, the results of the larger study could be published and then disseminated to veterinary offices, shelters, and even other organizations aiming to reduce compassion fatigue within this population. The data could then be used to determine which practices were most effective and why and then a volunteer or employee could take it upon himself or herself to organize weekly meetings and they can use the information to decide which practices they would like to use. Of course, they would need to attend a retreat or download the online version so they were familiar with the practices. Perhaps they could be offered à la carte by practice. As mentioned earlier, several reasearchers studying compassion fatigue have suggested meditating and maybe this study could provide them with the missing information about the meditations that would be most helpful.

APPENDIX A

CST IRB Proposal

1. Date: March 17, 2016.
2. Title: Combating Compassion Fatigue Amongst Animal Caretakers
3. Names of Researchers:
    a. Heather McDermott-Perez (Ph.D. Candidate at Claremont School of Theology)
    b. Dr. Alane Daugherty (Professor at Cal Poly Pomona)
4. Project period: July 10, 2016 – September 2, 2016.
5. Heather McDermott-Perez will be financially responsible for all funding.
6. Summary of the research objectives:
   The purpose of this research is to examine the efficacy of specific contemplative practices as a means to prevent or diminish compassion fatigue on animal caretakers. I hope that by conducting physiological testing, in conjunction with collecting appropriate survey data, we will find correlated scientific evidence that supports the use of these practices. Further, I hope to determine which contemplative practices show the most promise in combatting compassion fatigue and animal worker stress. Doing so will help me design a curriculum, based on these practices, that will aid in managing the negative effects of compassion fatigue, and enhance emotional and spiritual rejuvenation while continuing in this line of work.

   The study will span eight weeks, and will consist of an initial interview/pre-test, a one and a half hour a week, six week course on specifically designed contemplative practices, and a post training interview/post test. The pre- and post-training interviews will include completion of a compassion fatigue survey (ProQol 5), and the collection of physiological data (i.e. heart rate variability, skin conductance, 4 lead EEG and salivary cortisol) while the subject watches a two-minute slideshow depicting various images of animals, and is instructed to perform self-calming techniques. Both interviews will take place at the KIN dept. psycho-physiology lab at Cal Poly Pomona. (See #10 below for more specific details regarding data measurement and collection procedures).
7. Summary of relevant literature addressing risks: I have found no research addressing the risks of participant's viewing potentially distressing images. I have read several studies assessing salivary cortisol samples collected via cheek swab and no known risks were reported.
8. Population:
   My intended target population is: veterinarians, veterinary technicians, veterinary staff, animal shelter supervisors, kennel attendants, volunteers, animal rescuers, fosters, and networkers. Participants will be recruited from veterinary offices, animal shelters and rescue groups local to the Orange County, CA area. I will pass flyers out to the veterinary offices and the animal shelter. Social media seems to be the preferred method of networking for animal rescuers, shelter

volunteers, and animal fosters, therefore, I will also use Facebook and Instagram to recruit that segment of the population. An Informed Consent Form will be given to all participants at least three days prior to their initial interview. No monetary incentives will be offered for this study.

9. Consent: Please see the attached Informed Consent Form.
10. Summary of the Procedures: The study will begin with an initial interview where participants will be asked to fill out a short informational sheet describing their role and duties as an animal welfare worker. Next, participants will watch a two-minute slide show featuring various pictures of animals ranging from happy pets, to shelter animals, to images depicting or alluding to animal abuse, neglect, or injury (for example, a cowering dog with an imposing human above, a skinny cat, an animal with a broken leg, etc.) while being monitored for: skin conduction, heart rate variability, and EEG. Then we will also conduct a salivary cortisol test. Immediately following, the participant will take the ProQoL 5 survey (30 questions), which will be used to measure: compassion fatigue, burn out, secondary traumatic stress, and compassion satisfaction. These procedures will be used to test stress reactions. This will then be followed by a debriefing session to ensure the participants' feelings and concerns are addressed if he or she was affected by watching the video. For the next six weeks participants will meet once a week for one and a half hours each week where I will teach them the following contemplative practices: Remembering Sacred Moments, The Power of Pause, The Breath Practice, Focusing, an Internal Family Systems Practice, and finally, the Compassion Practice. I will also explain when to use these practices in their lives outside of our meetings. The week after our sixth session, we will meet again to conduct an exit interview, where participants will watch a two-minute slide show similar to the one they viewed at the initial interview, but images will be changed to control for a diminished stress response as a result of familiarity with the video. Again, the participant will undergo the same physiological testing he or she did in the initial interview. He or she will repeat the ProQoL 5 survey again followed by a debriefing session.
11. Respect for Participants: The most potentially distressing parts of the study are the two-minute slideshows presented at the initial and exit interviews. The researchers acknowledge that some participants may have a hard time viewing some images. One of the researchers will guide the participants through a debriefing session at the end of the interview. Additionally, surveys and physiological testing will be identified only by a number given to each participant to protect his or her privacy. Only the researchers will have access to this information.
12. Risks to Attendants and Subjects: Attendants run the risk of being temporarily distressed by the slideshow as well. Due to the personal nature of the study, attendants also run the risk of encountering an emotionally reactive participant and are expected to remain calm, professional and compassionate at all times throughout the study. Subjects may be temporarily distressed by some of the photos in the slide show presented during the interviews. There should be no long-lasting negative effects. Additionally, subjects may feel uncomfortable participating in contemplative practices as they may have preconceived notions of

religious connotations. The researchers will do their best to make all language inclusive and suitable to religious as well as secular participants. Subjects may also have emotional reactions to some of the practices, as they will be accessing parts of themselves that may have been traumatized. The practices are designed to aid in healing these traumas. The researchers will do their best to leave every meeting on an emotionally positive note. Participant's may also find the cheek swab to be mildly uncomfortable but there are no long-term risks.

13. Protection of Data: Upon the initial interview, participants will be given a number. All surveys, and physiological information will be identified only by number. A master log of the participant's names with their corresponding numbers will be kept in a safe at the primary investigator's residence for reference in the event that the participant forgets his or her number. All data will be kept until December 31, 2020 in the event that this study becomes part of a larger study that may require follow up. All data coded using the alias numbers will be kept in the researchers' computers and safely stored on at least one back up drive. No identifiable information will be kept on those devices. That information will also be destroyed on December 31, 2020. All participant's will have access to their surveys and physiological testing results at the conclusion of the study. This information will be identifiable only by number.
14. Outcomes: Compassion fatigue, burn out, secondary traumatic stress, and compassion satisfaction has been studied amongst the animal welfare community, however, I have seen no research using meditation or contemplative practices as treatment amongst this population. Several sources call for meditation as part of a protocol to cope with compassion fatigue but very few describe any techniques beyond breathing and none have studied their effects. No research has been done using physiological testing to support the suggestions that meditation is an effective coping mechanism for animal caretakers experiencing compassion fatigue. This research could be the first study using science to substantiate the healing effects of contemplative practices amongst this population. This could greatly benefit veterinarians, shelters, and rescuers alike.
15. CITI Training: Please find the attached CITI Training Certificate.

APPENDIX B

California State Polytechnic University, Pomona Informed Consent Form for Research Involving Human Subjects

You are being invited to participate in a research study, which the Cal Poly Pomona Institutional Review Board (IRB) has reviewed and approved. This form is designed to provide you - as a human subject - with information about this study. The Principal Investigator or his/her representative will describe this study to you and answer any of your questions. If you have any questions or complaints about the informed consent process of this research study, please contact the Compliance Office within Cal Poly Pomona's Office of Research and Sponsored Programs at (909) 869-4215.

Identification of Investigator and Purpose of Study

You are invited to participate in a research study, entitled "Combating Compassion Fatigue Amongst Animal Caregivers." The study is being conducted by Heather McDermott-Perez under the supervision of Dr. Andrew Dreitcer of Claremont School of Theology, 1325 N. College Ave; Claremont, CA 91711, adreitcer@cst.edu (909) 447-2542 and Dr. Alane Daugherty of Cal Poly Pomona, 3801 W. Temple Ave; Pomona, CA 91768, adaugherty@cpp.edu (909) 869-6962.

The purpose of this research study is to examine the efficacy of contemplative practices as a means to preventing or diminishing the effects of compassion fatigue on animal caretakers. Your participation in the study will contribute to a better understanding of the success of these practices. You are free to contact both the Primary Investigator or the Co-PI using the information below to discuss the study.

Dr. Alane Daugherty (909) 971-7031; adaugherty@cpp.edu; 608 N. Indian Hill Blvd., Claremont, Ca.

Heather McDermott-Perez (714) 280-2584; heather.mcdermott@cst.edu; 327 N. Janss St; Anaheim, CA 92805

You must be at least 18 years old to participate.

If you agree to participate:

- The study will span eight weeks and will consist of two interviews, two tests studying physiological responses to stressors, two surveys, and a six-week course learning contemplative practices.
- Your participation is intended to test the success of the learned practices in reducing the effects of compassion fatigue for animal caregivers.

- Your participation will consist of one initial interview where you will be asked to view a short (approximately two-minute) slideshow that will contain images that some people may find temporarily distressing. You will be monitored for physiological reactions, including ECG, while viewing the slideshow and at the conclusion you will be asked to fill out a survey testing stress responses/compassion fatigue. Placement of the ECG electrodes will require you to roll up a shirt, but only to the level of the lower rib cage. No clothing will need to be removed. Two electrodes will be placed (one on each side) in the 3rd intercostal space from the top rib (the space between the ribs), and one electrode in the 5th intercostal space from the bottom "free" or non-attached rib. The week following the interview, you will begin a six-week course meeting once a week for one hour where you will learn different contemplative practices. The week following the last class you will complete an exit interview where you will watch a short (approximately two-minute) slideshow similar to the slideshow in the initial interview, be tested for the same physiological reactions, and be asked to fill out the same survey testing stress responses/compassion fatigue.
- There will be no monetary compensation for your participation in this study.

Risks/Benefits/Confidentiality of Data

There are some possible risks or discomfort, which could cause you to feel temporarily distressed, uncomfortable, or embarrassed. You may be temporarily distressed by some of the photos in the slide show presented during the interviews. You may stop the slide show at any time. If you feel excessive stress from the slides you may contact the PI, Co-PI (numbers listed below) or either of two licensed therapists also involved in animal rescue work. Their info is as follows:

Lourdes Arguelles, Ph.D., LMFT
Senior Therapist, The Clinebell Institute
Cell: 909 292 8409

Anne M. Rivero, MSW
Psychiatric Social Worker'
Cell: 951 282 4903

Additionally, if the physiological measurements show excessive stress, the investigators will stop the slide show. There will be no costs for participating. Your name, email address and other personally identifiable information will be kept during the data collection phase. No personally identifiable information will be publically released. Your personal information, if collected, will be used solely for tracking purposes. A limited number of team research members will have access to the data during data collection. Those research team members are: Heather McDermott-Perez and Alane Daugherty, Ph.D.

When the results of the research are published or discussed in conferences, no information will be included that would reveal your identity. No photographs, videos, or

audio-tape recordings of your participation will be taken. Your information will be stored until December 31, 2020 and then destroyed.

Participation or Withdrawal

Your participation in this study is voluntary. You may decline to answer any question and you have the right to withdraw from participation at any time – including stopping the slide show if you feel distressed. Withdrawal will not affect your relationship with Claremont School of Theology, or Cal Poly Pomona in any way. If you do not want to participate, you may simply stop participating.

Contacts

If you have any questions about the study or need to update your email address contact the primary investigator, Dr. Alane Daugherty at (909) 971-7031 or email adaugherty@cpp.edu, or the co-primary investigator Heather McDermott-Perez at (714) 280-2584 email heather.mcdermott@cst.edu. This study has been reviewed by Claremont School of Theology Institutional Review Board study number is 2016-13, and the Cal Poly Pomona Institutional Review Board, study number IRB-16-154

Questions about your rights as a research participant.
If you have questions about your right or are dissatisfied at any time with any part of this study, you can contact, anonymously f you wish, the chair of the Institutional Review Board at CST by phone at (909) 447-6344 or email irb@cst.edu, or the Institutional Review Board at Cal Poly at (909) 869-4215

Thank You

SIGNATURE OF RESEARCH PARTICIPANT

I have read the information provided above. I have been given an opportunity to ask questions and all of my questions have been answered to my satisfaction. I have been given a copy of this form.

_____
Name of Participant

_____
Signature of the Participant *Date*

Address

_____
Phone *Email*

SIGNATURE OF WITNESS

My signature as witness certifies that the participant signed this consent form in my presence as his/her voluntary act and deed.

_____

Name of Witness

_____

Signature of Witness *Date*

SIGNATURE OF INVESTIGATOR

_____

Signature of Investigator *Date*

APPENDIX C

Introductory Informational Survey

1. What is your role as an animal caretaker? (circle one)

Shelter Veterinarian Kennel Attendant Other Shelter Staff Shelter Volunteer

Animal Rescuer Networker Non-shelter Veterinarian Non-shelter Vet Staff

2. How many hours a week do you work/volunteer? (circle one)

0-5 6-10 11-15 16-20 21-25 26-30 31-35 40+

3. How long have you been in this line of work/volunteering? (circle one)

0-11 months 1-2 years 3-4 years 5-6 years 6-7 years 8-9 years

10-11 years 12-13 years 14-15 years more than 15 years

4. How much of the time you spend working/volunteering do you have direct contact do you have with animals? (circle one)

Never Rarely Sometimes Most of the Time Always

5. (Optional) within the last six months, have you had any cosmetic or other procedure that may effect the movement of your facial muscles? (This is asked because we will be evaluating your emotional responses by monitoring facial muscle activity and procedures such as botox may affect those readings)

Yes No

APPENDIX D

Final Informational Survey

1. Has your role as an animal caretaker changed since the inception of this study? (circle one)

Yes No

If yes, please explain:

2. How many days a week did you engage in one of the contemplative practices you were taught? (circle one)

1 2 3 4 5 6 7 8+

3. Which practice did you engage in the most? (circle one)

Sacred Moment Power of Pause Breath Prayer

Focusing Internal Family Systems Compassion Practice

4. Which practice did you find the most helpful and why? (circle one)

5. (Optional) within the last six months, have you had any cosmetic or other procedure that may effect the movement of your facial muscles? (This is asked because we will be evaluating your emotional responses by monitoring facial muscle activity and procedures such as botox may affect those readings)

Yes No

APPENDIX E

Professional Quality of Life Scale (ProQOL)

Compassion Satisfaction and Compassion Fatigue
(ProQOL) Version 5 (2009)

When you *[help]* people you have direct contact with their lives. As you may have found, your compassion for those you *[help]* can affect you in positive and negative ways. Below are some-questions about your experiences, both positive and negative, as a *[helper]*. Consider each of the following questions about you and your current work situation. Select the number that honestly reflects how frequently you experienced these things in the *last 30 days*.

1=Never 2=Rarely 3=Sometimes 4=Often 5=Very Often

_____ 1. I am happy.
_____ 2. I am preoccupied with more than one person I *[help]*.
_____ 3. I get satisfaction from being able to *[help]* people.
_____ 4. I feel connected to others.
_____ 5. I jump or am startled by unexpected sounds.
_____ 6. I feel invigorated after working with those I *[help]*.
_____ 7. I find it difficult to separate my personal life from my life as a *[helper]*.
_____ 8. I am not as productive at work because I am losing sleep over traumatic experiences of a person I *[help]*.
_____ 9. I think that I might have been affected by the traumatic stress of those I *[help]*.
_____ 10. I feel trapped by my job as a *[helper]*.
_____ 11. Because of my *[helping]*, I have felt "on edge" about various things.
_____ 12. I like my work as a *[helper]*.
_____ 13. I feel depressed because of the traumatic experiences of the people I *[help]*.
_____ 14. I feel as though I am experiencing the trauma of someone I have *[helped]*.
_____ 15. I have beliefs that sustain me.
_____ 16. I am pleased with how I am able to keep up with *[helping]* techniques and protocols.
_____ 17. I am the person I always wanted to be.
_____ 18. My work makes me feel satisfied.
_____ 19. I feel worn out because of my work as a *[helper]*.
_____ 20. I have happy thoughts and feelings about those I *[help]* and how I could help them.
_____ 21. I feel overwhelmed because my case [work] load seems endless.
_____ 22. I believe I can make a difference through my work.
_____ 23. I avoid certain activities or situations because they remind me of frightening experiences of the people I *[help]*.
_____ 24. I am proud of what I can do to *[help]*.
_____ 25. As a result of my *[helping]*, I have intrusive, frightening thoughts.
_____ 26. I feel "bogged down" by the system.
_____ 27. I have thoughts that I am a "success" as a *[helper]*.
_____ 28. I can't recall important parts of my work with trauma victims.
_____ 29. I am a very caring person.
_____ 30. I am happy that I chose to do this work.

APPENDIX F

SELECTED IMAGES FROM SLIDESHOW

(Leigh Munro, "Willy," Australia, accessed July 20, 2016, https://web.archive.org/web/20170402012447/http://s56.photobucket.com/user/veganbunnygirl/media/RABBIT%20FARM/Willie.jpg.html. Used by permission.)

(Allejandro Fallabrino, Uruguay, accessed July 20, 2016, https://web.archive.org/web/20170402013905/https://katypye.com/elizabeths-sea-turtles/threats-to-sea-turtles/. Used by permission.)

(Corridor Rescue, Houston Texas, accessed July 20, 2016, https://web.archive.org/web/20170402014645/http://houston.culturemap.com/news/city-life/02-04-13-11-10-dont-look-the-other-way-houstons-homeless-and-abandoned-animals-need-help-now/slideshow/. Used by permission.)

APPENDIX G

ProQOL 5 Results

Participant 1 Pre Test Scores			
	Raw	Meaning	T-Score
CS	36	Average	49
BO	32	Average	66
STS	29	Average	75

Participant 1 Post Test Scores				
	Raw	Change	Meaning	T-Score
CS	34	-2	Average	47
BO	31	-1	Average	65
STS	31	2	Average	77

Participant 3 Pre Test Scores			
	Raw	Meaning	T-Score
CS	41	Average	56
BO	22	Low	52
STS	29	Average	75

Participant 3 Post Test Scores				
	Raw	Change	Meaning	T-Score
CS	43	2	High	59
BO	23	1	Average	53
STS	25	-4	Average	n 67 and 70

Participant 4 Pre Test Scores			
	Raw	Meaning	T-Score
CS	45	High	61
BO	18	Low	46
STS	18	Low	58

Participant 4 Post Test Scores				
	Raw	Change	Meaning	T-Score
CS	40	-5	Average	55
BO	16	-2	Low	44
STS	17	-1	Low	57

Participant 5 Pre Test Scores			
	Raw	Meaning	T-Score
CS	37	Average	51
BO	32	Average	66
STS	25	Average	n 67 and 70

Participant 5 Post Test Scores				
	Raw	Change	Meaning	T-Score
CS	37	0	Average	51
BO	29	-3	Average	62
STS	31	6	Average	77

Participant 7 Pre Test Scores			
	Raw	Meaning	T-Score
CS	27	Average	37
BO	22	Low	52
STS	27	Average	71

Participant 7 Post Test Scores				
	Raw	Change	Meaning	T-Score
CS	27	0	Average	37
BO	22	0	Low	52
STS	26	-1	Average	70

Group Summary Changes				
Participant	CS	BO	STS	Cut Score
1	-2	-1	2	No Change
3	2	1	-4	CS: Average --> High BO: Low --> Average
4	-5	-2	-1	CS: High --> Average
5	0	-3	6	No change
7	0	0	-1	No Change
Totals	2 decreased 2 no change 1 increased	3 decreased 1 increased 1 no change	2 increased 3 decreased	CS: 1 Avg --> High; 1 High to Avg. BO: Low ---> Avg

APPENDIX H

Physiological Data

	EDA Amplitude		
Participant	**Pre**	**Post**	**Change (Pre - Post)**
1	0.236320496	0.06539481	0.170925685
3	0.05645752	0.15625	-0.09979248
4	0.012969971	0.109209333	-0.096239362
5	0.198225542	0.011698405	0.186527137
7	0.054626465	0.032806396	0.021820069

	EMG 1 Peak		
	Corrugator (Brow) Muscles		
Participant	**Pre**	**Post**	**Change (Pre - Post)**
1	45.61917	14.20205	31.4171226
3	35.96106	66.50227	-30.54121394
4	20.80604	69.3021	-48.49605713
5	23.19488	60.02928	-36.83439932
7	44.51465	60.02928	-15.51462845

	RSA		
Participant	**Pre**	**Post**	**Change (Post - Pre)**
1	95.10869565	71.1875	-23.92119565
3	30.66666667	46.525	15.85833333
4	27.91666667	76.42307692	48.50641026
5	66.02272727	N/A	N/A
7	20.5	39.94736842	19.44736842

	Heart Coherence (sec^2)		
Participant	**Pre**	**Post**	**Change (Post - Pre)**
1	6.72E-01	3.287751	2.62E+00
3	1.37E+00	2.773633	1.41E+00
4	0.624837	5.667414	5.04E+00
5	1.424043	0.858331	-5.66E-01
7	0.42514	0.743875	3.19E-01

	Overall Summary		
Test	**Hypo Supported**	**Hypo Not Supported**	**Neutral**
CS	3	2	2
BO	3	1	1
STS	3	2	
EDA	3	2	
EMG (1)	1	2	2 N/A
EMG (13)	2	2	1 N/A
RSA	3	1	1 N/A
Heart Coherence	4	1	
Cortisol			

	EMG 13 Peak		
	Zygomatic (Smile) Muscles		
Participant	**Pre**	**Post**	**Change (Pre - Post)**
1	44.97701	39.38507	5.591944723
3	16.5164	76.36588	-59.84947728
4	46.74938	60.02928	-13.27990547
5	11.71303	30.33187	-18.61883846
7	64.01069	35.4987	28.51198274

APPENDIX I

Pre and Post Test Questionnaires

Pre Test Questionnaire						
Participant	**Role**	**Hours/Week**	**Time Working**	**Direct Contact**	**Botox**	**Notes**
1	Rescuer	40+	5-6 years	Always	no	Participant reported she was exhausted from the previous weekend's activities. She was also preoccupied with her phone and seemed somewhat stressed while looking at it.
3	Shelter Volunteer	11-15 hours	1-2 years	Always	no	
4	Shelter Volunteer	0-5 hours	3-4 years	Most of the time	no	
5	Networker	31-35 hours	5-6 years	Most of the time	no	
7	Non-shelter Vet Staff	40+ hours	More than 15 years	Always	no	

Post Test Questionnaire							
Participant	**Role Change**	**Explain**	**Days/Week Engaged**	**Most Practiced**	**Most Helpful**	**Why?**	**Botox**
1	Yes	Responsibility increased bc took in 2 dogs with behavior problems, in addition to her own 3 dogs because fosters failed them and put them in unsafe situations	4	Sacred Moment/Power of Pause	Power of Pause	Helped her to step away or look back and then react calmly rather than analyzing and building anger	No
3	No		3	Sacred Moment/Breath Practice	Breath Prayer/Sacred Moment	Helped clear mind and focus on breathing/"happy" place helps to calm when upset	No
4	Yes	Calmer perspective after taking course. Better Equipped to handle situations	2	Sacred Moment/Breath Practice	Breath Prayer	Can use no matter where she is - can go to car during the day (at work) and practice at lunch or at home	No
5	No		4	Power of Pause	Power of Pause	Helped de-stress in spur of the moment/stressful situations	No
7	No		3	Breath Practice	Compassion Practice	Bc of a particularly difficult coworker	No

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